

The -----

Climates

And -----

Health Resorts

Of -----

Canada

By P. H. BRYCE, M.A., M.D.,
Sec. Provincial Board of Health
of Ontario.

The EDITH *and* LORNE PIERCE
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Queen's University at Kingston

CLIMATES AND HEALTH RESORTS OF CANADA

Being a short description of the Chief Features
of the Climate of the different Geographical
Divisions of Canada, and References
to some of their Chief Health
Resorts.

SECOND EDITION

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MY native soil is Ithaca the fair,
Where high Neritus waves his woods in air;
Dulichium, Same, and Zacynthus crown'd
With shady mountains, spread their isles around;
(These to the North and Night's dark regions run,
Those to Aurora and the rising sun!)
Low lies our isle, yet blessed in fruitful stores;
Strong are her sons, though rocky are her shores;
And none, ah none, so lovely to my sight
Of all the lands that Heaven o'erspreads with light.

—POPE'S ODYSSEY.

INTRODUCTION.

While it is comparatively easy to give in detail the special climatic peculiarities attaching to any localized area of a country where a population has dwelt for years and the meteorological conditions have been the subject of scientific enquiry, yet it is manifestly quite different when an attempt is made to condense within the limits of a small pamphlet the qualities of the climates of an area some 4,000 miles in breadth, bordered by two oceans of markedly different characters and extending almost half the distance from the Equator to the Pole. But it is still more difficult to assign their proper value to the various elements entering into the climate of such a region, when the surface has a great waterway of fresh water lakes and rivers extending into the interior for 2,000 miles, and another region broken from north to south by a lofty mountain range, flanked on the one hand by extensive foothills and plains, and on the other by a series of minor ranges of mountains. It has therefore been thought better to attempt to divide the climate of Canada in such a manner as would illustrate rather the peculiarities of such regions as have topographical and meteorological conditions more or less common to them, than to utilize any such artificial classification as political sub-divisions. To this end, the following classification of the climates of Canada has been adopted as being that most likely to give the reader a correct idea of the chief features marking the climate of Canada as a whole :—

- (1) The Maritime and Lower St. Lawrence Climate.
- (2) The Upper St. Lawrence and Great Lakes Climate.
- (3) The Inland Forest Areas of Old Canada Climate.
- (4) The Prairie Climate of the North-West.
- (5) The Mountain or British Columbia Inland Climate.
- (6) The Pacific Coast Climate.
- (7) The Yukon and Sub-Arctic Climate.

HEALTH RESORTS AND CLIMATES OF CANADA

CHAPTER I.

Topography and General Climatic Features of Canada.

It will be quite possible to give to the reader, who not only remembers the latitude and longitude of Canada as a whole, but will also study from our maps the deep indentation which the St. Lawrence and its chain of mighty lakes makes into the continent with a total length from the Gulf to Thunder Bay of 2,000 miles, and the juxtaposition of Lake Superior with the great inland salt sea of Hudson's Bay, who will observe the extent of prairie country beginning where the Laurentian rocks end near Rat Portage and extending directly westward over 1,000 miles, or who will notice the outlines of the Rocky Mountains and their western supporters, the Selkirks and Coast Range, extending as a sea of mountains for 500 miles to the Pacific Ocean, a fairly complete idea of the main distinctive features of the climate of each of these extensive regions, with illustrations of some of the individual localities which, through their natural attractions, their easiness of access or their proximity to some large centre of population, have become at least locally noted health resorts. That many of them will become widely known as their health-giving qualities become manifest is as certain as that the exhilarating qualities of Davos Platz, unknown fifteen years ago to the world, had only to be appreciated and to be given to the scientific and professional world in order that thousands should yearly seek those Alpine heights for recuperation and recovery.

To comprehend some of the chief elements which give quality to our Canadian climate, we have to remember that, compared with Europe with its marvellously indented coast-line, North America has but two-thirds the amount of coast-line of that continent. This coast-line is, moreover, that of two oceans instead of one; while again Europe, though having many mountain ranges, has them running in various directions,

CHARACTER OF COAST-LINES COMPARED.

whereas North America has its one great backbone whose influence gives character to the whole interior of the continent. We thus have two distinctly marked climates, the continental and the marine. Of the latter

we have, moreover, two very well defined classes. The whole of western Europe feels that marvellous influence of the Gulf Stream, which extends even to the Orkneys, almost in 60° N. Lat. Canada, in like manner, has on its west coast the equally notable Kuro Sivo current from the Japanese seas. In both instances the current moves southward, moderating the climate of the neighboring coasts for many miles inland. The eastern coast of Canada, however, feels the influence of the Gulf Stream to a comparatively slight degree. Indeed, down from Davis Straits, past the

INFLUENCE OF OCEAN CURRENTS.

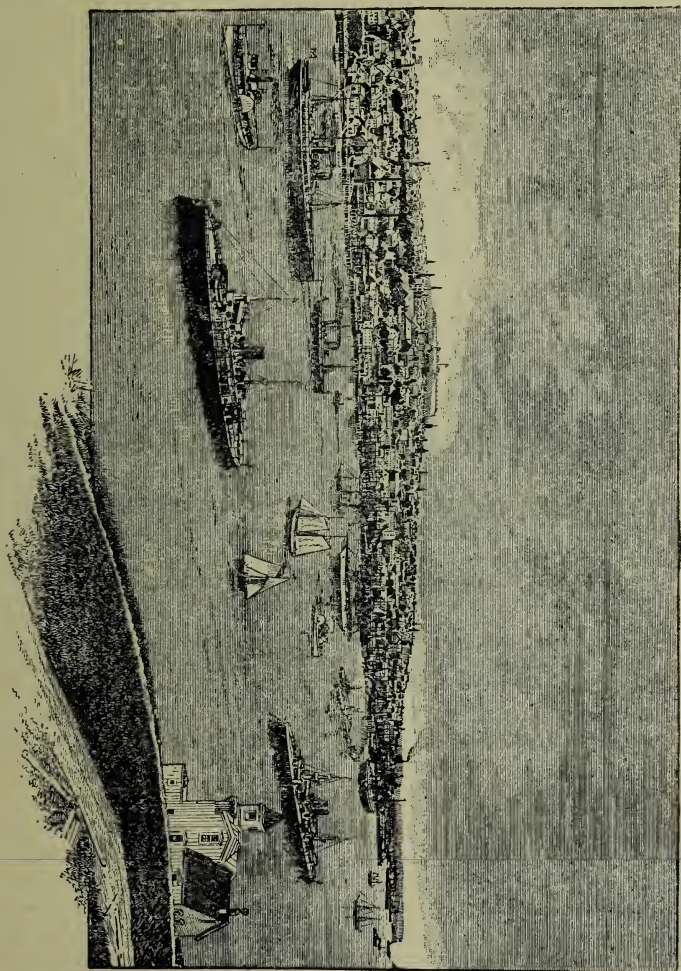
Labrador coast, moves a Polar current, which serves to throw the isotherm of the north-temperate zone notably southward, and, though it mingles its waters with those of the Gulf Stream, it nevertheless gives to the eastern coast of Canada a distinctly colder marine climate than that of England. But while the Maritime provinces have on the sea-board a

cold and damp climate in winter, the same causes produce, from May until November, a climate, the glorious and stimulating influences of which make one almost intoxicated even to think of. The island of Prince Edward, our easternmost province, though she receives the shock of the cold breakers from the north, is one of the most fertile spots in all Canada, growing

PRINCE EDWARD
ISLAND.

enormous crops of potatoes and oats, and reaps a sea-harvest in the clear, cold waters off her coast such that her hospitable people have been enabled to make a dozen centres on the coasts of the tight little island delightful places for recuperation and pleasure, not more because the ozone

CITY OF HALIFAX NOVA SCOTIA.



ized, cool air gives appetite and a relish to existence, than because of the constant invitation it gives whether to riding and driving over sea-sands and the beautiful country roads with their long, winding lines marked in red, from the new red sandstone soil of which the island is formed, or in yachting or going to sea with the fishermen in their dories.

Nova Scotia, the eastern mainland, extending between $43\frac{1}{2}$ and 47° N. Lat., is practically an island in the ocean, being not very much more than a degree in extent at any point north and south, but running across three

degrees of latitude from the south-west to the north-east, and at no point having a height much exceeding 1,000 feet above the sea. The whole province forms little more than a low-lying extension of the Alleghanies of the American mainland, whose granites and metamorphic rocks as a backbone, with a rim here and there of limestone and on the Fundy shore of red sandstone, give to the sea-shore a series of innumerable inlets, fiords and bays, which make it the most perfect yachting ground in all America. From St. Mary's Bay, and inside Digby Neck, near the entrance to the Bay of Fundy, to the fiords of Cape Breton, forming a series of arms to the sea of marvellous beauty, known as the Bras d'Or Lakes, or "Arms of Gold," every coast-line, and indeed the whole interior of the narrow peninsula, presents an ever-varying panorama of mingled land and sea pictures, which are surely

TOPOGRAPHY AND landscape and climate. Alternate smiles and tears
CLIMATE OF might be expected to prevail in a country so exposed
NOVA SCOTIA. to changing influences of wind and temperature.

While the winters are necessarily damp and cold and the spring late, owing to the cold currents from the north-east, there is without doubt no part of all America where the climate from June to November presents the same infinite charms of soft airs blowing over land and sea, with a sky overhead whose blue is visible through an atmosphere of great clearness and purity.

Connected with Nova Scotia by a narrow isthmus, New Brunswick, lying to the north-west, stretches from the Bay of Fundy on the south in 45° N. Lat., to the Baie des Chaleurs in 48° N. Lat., on the north. Extending east and west for three degrees, this province geologically forms the side of the Laurentide basin of Nova Scotia, and includes a wedge-shaped territory, with its apex south-westerly, and formed of a carboniferous series

TOPOGRAPHY of limestone formations containing some of the most
OF marvellous bituminous coal beds in the world. The
NEW BRUNSWICK. Joggins seams, with their carbonized tree trunks, are
the geologist's delight, and the marvel of the unin-
itiated; metamorphic ridges crop up here and there

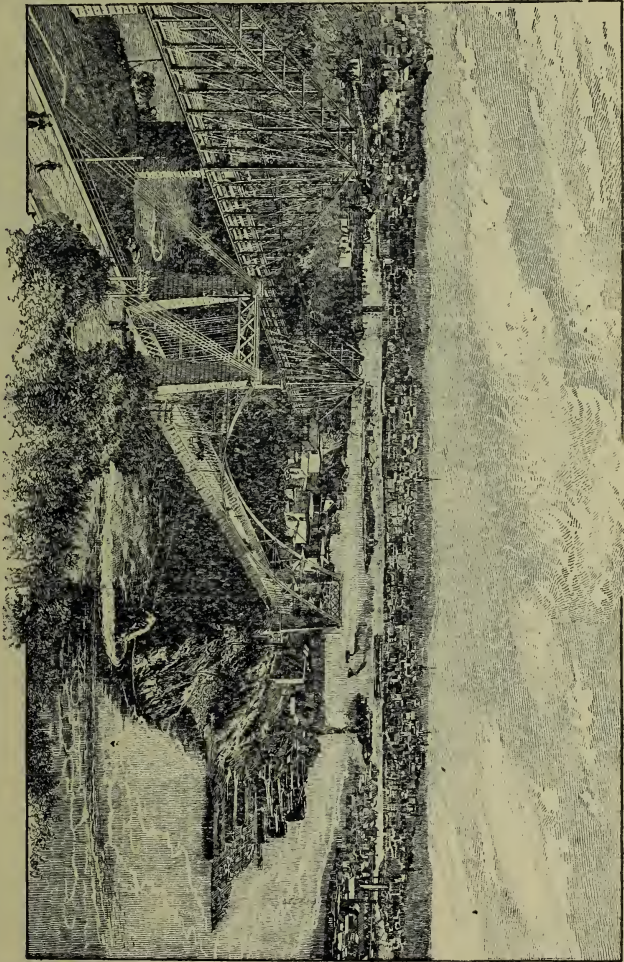
along the Bay of Fundy, while others in the west run north-easterly, following the general trend of the Appalachians. The country while therefore rough and hilly in some portions, nevertheless does not rise anywhere higher than 1,500 feet above the sea-level. The whole east coast is exposed to the force of the cold north-east winds from the Gulf of St. Lawrence, but the province as a whole lies inland. The soils over the great carboniferous area have been heavily wooded and fertile, while the alluvial bottoms along the rivers are most productive.

Running centrally towards the south, where it empties its cold northern waters into the Bay of Fundy, the St. John river extends north-westerly for a length of 500 miles, forming the north-easterly boundary between the province and Maine, and taking its origin in the chain of small lakes in the Appalachian range in the height of land, whose northern streams flow into the St. Lawrence. In the upper portion of the river the stream runs between high rocky banks to the Grand Falls. Terraces of river gravels rise in many places towards these hills and tell here, as everywhere, the old glacial story of prehistoric Canada. For scenic beauty, certainly nothing can easily surpass the river journey from Fredericton, the political capital, to St. John, the commercial capital of the province. The broad stream flows with increasing swift-ness towards its mouth until it finds itself suddenly checked some distance above the city by the wonderful natural phenomenon where the river, passing through two perpendicular cliffs 300 feet apart, descends, when the tide is out,

in a beautiful waterfall over a rocky ledge, this again only to disappear as the high tides, often approaching thirty feet, swallow up the waterfall and ledge, and set a swift-flowing current up the river.

New Brunswick has thus a well-marked inland climate, which in the more northern portions presents the features of bright, delightful summers and autumns, where the outdoor sports of fishing and hunting in the forest wilds, and canoeing on the mountain streams and lakes everywhere, attract thousands of tourists from the great American cities of the NEW BRUNSWICK. eastern coast. Indian summer is present in all her perfections in the crisp upland areas after the first snow falls, and the moose is hunted into November, when a steady winter, with

CITY OF ST. JOHN, NEW BRUNSWICK, FROM REVERSIBLE FALL.

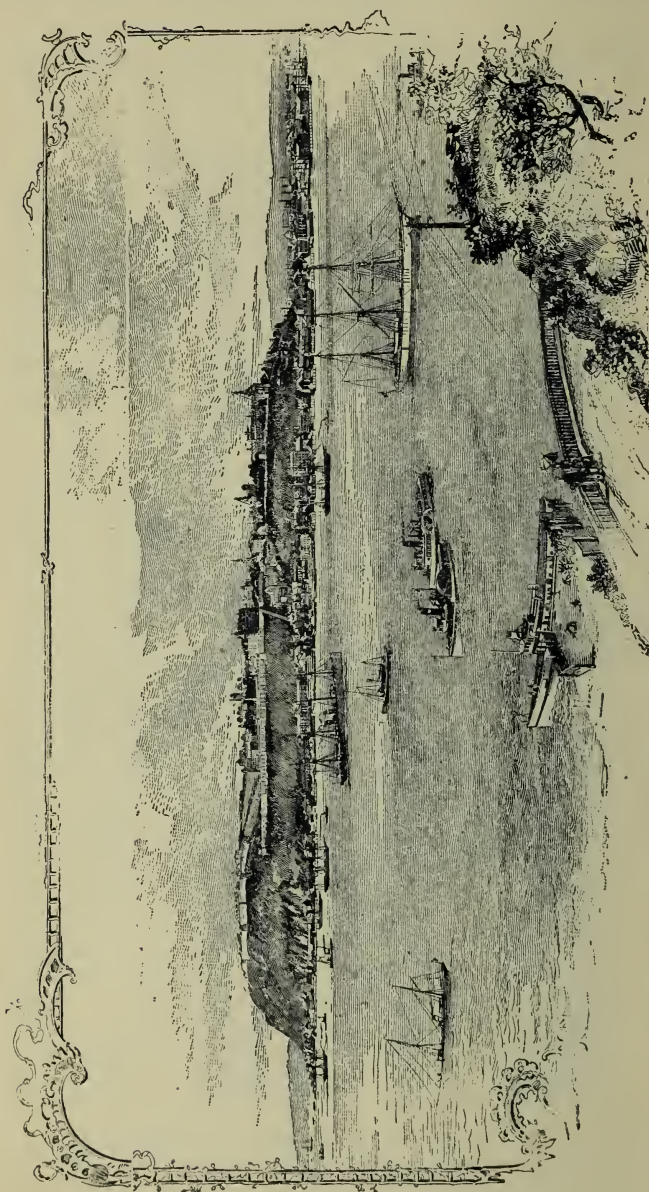


heavy snowfalls and low temperatures, supplies the Canadian ideal of invigorating and healthful weather. The summer inland is hotter than the coast regions, but taken altogether New Brunswick, with her sister provinces down by the sea, has a summer season which is unrivalled on the continent.

Bounding the shores of the great river where it widens into the Gulf of St. Lawrence, begins the oldest of all the provinces of Canada, Quebec.

Between 48 and 52° N. Lat. at the eastern boundary, the province dips rapidly south-westward, following the course of the St Lawrence, until at the south-west angle it touches the United States boundary in 45° N. Lat. Between the river and the southern boundary the western part of the province, known as the Eastern Townships, is a level expanse of splendid

TOPOGRAPHY OF QUEBEC.



CITY OF QUEBEC FROM LEVIS.

agricultural country, with isolated volcanic mounts of trap rising up as sentinels in the plain. Montreal Mountain, and that behind St. Hilaire, well illustrate this local peculiarity.

The province as a whole forms the beginning in Canada of a widely extended region known geographically as the Laurentides, which, rather a range of undulating hills and dales than of mountains and valleys, formed by the foldings of metamorphic rock strata, run north-westerly from the Gaspé peninsula throughout all northern Quebec and Ontario, and extend thence again north of Lake Winnipeg till lost in the Kamash Hills, where Mr. Gilbert Parker locates his "Little Pierre and his People," and the abode of the "Scarlet Hunter." Highest in Gaspé are the Shick-Shock Mountains, where terminates the Appalachian range, reaching in such peaks as Bayfield and Logan, 3,500 to 4,000 feet, and the Laurentides, which, throughout their thousands of miles of extent, hold myriads upon myriads of lakes, which are connected by as numerous water-courses.

At Montreal Island meet the two great inland rivers, the St. Lawrence and the Ottawa, which drain all Quebec and Ontario south of the height of land, and give their special characteristics to all this region. The valley of the Ottawa, running north-westerly for 700 miles, far beyond the City of Ottawa, marks the western edge of the gneissoid strata, and flows throughout much of its course in a curious synclinal depression of the Laurentides. The headwaters of this mighty river rise in the extensive upland region, on the east in the Province of Quebec and on the west in the Province of Ontario, which forms the height of land between the Great Lakes and Hudson's Bay. This whole region forms an essential part of the Laurentide series of hills and valleys, and reaches at their highest point in Ontario some 2,000 feet. From Montreal and Ottawa in 45° N. Lat. to the height of land a few miles north of Thunder Bay at the head of Lake Superior nearly five degrees of latitude

have been crossed, and the general characteristics of the climate are those of a long, steady winter from November to April, with an abundant snow-fall over the immense forest areas of pine, hemlock, and cedar, and of birch, maple and other deciduous trees. Best fitted, where cleared, for sheep farming and cattle ranching, this whole territory is the huntsman's and trapper's paradise. The climate, if rigorous in winter, is most healthful and enjoyable. Many are those who, delicate and consumptive, have sought health and not in vain in the rough life of the lumber woods, with plain shanty fare where bacon, bread and beans have been the staples. The snow under foot is dry, and the air crisp and ozonized in the highest degree. The absence of high winds, with the forest everywhere, gives to these districts such distinctive claims that they are destined to play a most important part in the question of sanitariums for consumptives. The snow gone, summer is almost immediately present in these regions; and such summers! The ice-cold streams from hundreds of lakes buried in the forest recesses form highways in every direction for the tourist, sight-seer, or sportsman, who, traversing river and lake and portage, lies down at night by the camp fire marvelling that he is only tired, never exhausted. Muscles, appetite, eye, ear, indeed his whole physical nature, are aroused, and in an atmosphere never sultry and always bracing he inhales an air as intoxicating as wine.

From Thunder Bay westward to the edge of the prairie just beyond Rat Portage the country is of the same general character, and crossing from the headwaters of the Kaministiquia to those of the Rainy River section, one may to-day enjoy the double pleasure of the splendid canoe-routes ending at Rat Portage, and of prospecting for gold in this new-found El Dorado of Ontario. Winter here is steady and occasionally very cold, but we are still in the wooded region where the still air is most enjoyable.

Now, however, passing from the western edge of the Laurentian, we enter upon the prairie region, which is unbroken for a thousand miles till the

mountain section is reached. Northward in 54° N. Lat. the Laurentian Hills still border the plain, and the country is again wooded with evergreens and poplar. The lowest area of the plains is that of Manitoba, —the Red River from the south, the Saskatchewan from the west, and their tributaries all trending towards Lake Winnipeg and thence to Hudson's Bay. All this great area extending for some distance to the height of land in Dakota, U.S., shows evidences of once having been an immense inland sea, with its several beaches, marking more or less distinctly the successive levels of the waters of what geologists have chosen to call the great post-glacial lake of Agassiz. A black alluvium of the richest nature covers practically the whole of this country, and makes the great wheat-fields of the Canadian North-West, yielding their "Manitoba No. 1 hard." The lowest area of this region is limited westward by the Pembina Mountain, Riding Mountain, and the Porcupine Hills, having a general level of 800 feet. Westward the next area reaches a height of some 1,500 feet and runs westward some 250 miles, when the next elevation of 2,000 feet is reached. This country, the Grand Coteau, rises till a height of 4,000 feet is reached in the foothills of the Rockies in the region about Calgary. This upland shows more evidences of deep erosion of the valleys of its streams, and has here and there bluffs with high hills and plateaus, notably the Cypress Hills north of the American desert, with climatic peculiarities quite its own. This whole higher region, marked notably by a greater dryness, is essentially a grazing or ranching country. While cold, owing to the altitude and the exposure of its plains to the winds from the mountains, its dry plains are nevertheless covered with the peculiar bunch grass of the country which has served to make the foothills of the Rockies the greatest stock-raising areas of the continent. The climate of the whole great prairie country of the Canadian North-west, is marked by seasonal rather than daily extremes, except in the higher foothills of the mountains to the west, where the daily range is notable. Taken as a whole the country is largely treeless and as such gives free scope to the atmospheric movements, coming from whatever direction they may. The winter season, often with the thermometer falling to 20° to 30° below zero, begins usually in November, succeeding an autumn bright, bracing and regular, when the crisp winds, blowing from the northwest plains, as the evening comes on, serve not only to remind of the coming winter, but give that strength and purpose to the movements of every inhabitant which has gained for Manitobans the complimentary western title of "rustlers." Like climate, like people! And certainly the Manitoban of to-day bears the palm as the Canadian of action.

TOPOGRAPHY
OF THE
PRAIRIE REGION
OF THE
NORTH-WEST.

The bright, clear, cold of the ordinary winter day of Manitoba is most enjoyable. With little or no thawing and no sea or uncongealed great fresh-water lake to supply dampness, the air is crisp and dry, and where in England or on the sea-coast with a few degrees of frost the air is chill and raw, many more degrees of cold in the Canadian North-west is only enjoyable and stimulating.

THE NORTH-WEST.

The winter goes, as it comes, almost in a day. The crescent sun pours his powerful rays through the transparent atmosphere, and, when the thaw has begun, the great atmospheric disturbances, caused by the heated centres, cause the north-west wind to blow and lick up the water, which covers the plains, seemingly all in a day. One has not infrequently seen the water on the low ground a foot deep in the morning and gone in the evening; while in another day or two the black alluvium, which, like the blackened plate of glass, absorbs heat in seemingly enormous quantities, is dry and powdery on the fields ploughed in the autumn. Seeding proceeds when the frost is not more

than four inches out of the ground. Then in a few days the prairie is dotted with the spring flowers. Seldom is the spring long, damp, and cold. Spring comes, growth is phenomenal, and the harvest of spring-wheat is ripened in the middle of August. With such a soil, marvellous in the amount of its plant foods, and with the long, bright, even occasionally hot summer day, the metabolism of the plant cells is so rapid as only to be likened to the growth of plants under glass. To the plodding, laboring, waiting, husbandman of England or Scotland it seems so unreal as to be incredible that four, or at the most five, short months should yield for an area of 1,500 000 acres some 30,000,000 bushels of wheat, and as much more of other grains, to feed the toiling millions of continental cities *

Westward from the lower alluvial plains of Manitoba the climate, as already stated, is drier, and there being higher, the temperature, though the summer is hot in the day, may, through the very rapid radiation, fall rapidly at night. If not so favorable for grain raising as Manitoba proper, certainly for cattle-runs, and as the country where the tired, anæmic, sick man may get well, few places can excel or equal it. One who has seen the rolling uplands beyond Maple Creek and stretching all the way to Calgary and Macleod can alone comprehend what the *illimitable* may mean. Far on the distant bluff, with the billowy prairie rising and falling, are seen one or more dark objects standing and breaking the sky-line like some ancient cromlech or Druid-stone. Gradually approaching these, mayhap in the train, one observes many figures in the shadow of the hills, and at length, as the point of view slightly changes, he sees a whole upland dotted with hundreds and thousands of cattle browsing the tufts of bunch grass as did their confreres, the buffaloes, for hundreds of years before them. These are the ranches, where

PLATEAU OF THE already the stockman tells us the human population of
FOOTHILLS. one to ten thousand acres is becoming too numerous.

But as for the climate, one need only look at the cattle, large boned, sinewy, with senses almost as acute as the antelope's, and yet withal abundantly clothed with flesh, having a flavor the choice of connoisseurs and gourmets, to understand that such atmospheres are those surely that Shakespeare's imagination realized :

“ The blessed Gods
“ Purge all infections from our air, whilst you
“ Do climate here.”

When it is remembered that though the thermometer may suddenly fall in January to 30° or 40° below zero on these plains, and yet that these ranch cattle live through it all and grow strong and ready to put on flesh when the fresh grasses grow green in the spring, it becomes apparent that in the quality of excessive dryness we have an explanation of facts otherwise inexplicable. With an annual rain-fall in many places not exceeding 11 inches, it may be understood that snow never falls to any great depth in winter, and even with an occasional storm, a warm wind through the mountains from the west and the excessive evaporation into the dry rarefied air lick it up as by magic and the curious phenomenon occurs that plowing near the Cypress Hills may be seen in February and cricket be played in Calgary on Christmas Day. Such dry heights, common with the eastern slopes of the Rockies continuously to New Mexico, do, however, present the characters of extreme variability as regards daily range of temperature, only to be explained by their altitude, excessive dryness, and diathermancy of the atmosphere. They form a climate *sui generis*, and while an occasional high wind in the afternoon presents features which to some might be disagreeable or trying, yet from the standpoint of elevated, dry, and stimulating climates as promoting rapid metabolism and

* The wheat harvest in 1897 began in Qu'Appelle Valley on August 1st.

reconstruction of tissues their positive virtues for the consumptive have been too long tested to admit of any question.

But the foothills passed, we have entered the Rocky Mountain passes. In a mountain range, where the peaks reach heights of 8,000 and 10,000 feet, where the line of perpetual snow is reached at some 8,000 feet, and which moreover forms one continuous range from north to south, it may naturally be supposed that the habitable localities are comparatively small. There are practically but three passes or highways through the mountains north of 49° N. Lat., and each forms the valley of streams which, gathered from the torrents flowing through rocky canyons and gulches and formed by the melting snows of the glaciers, and the heavy snowstorms occurring in the mountains in winter, are turned east or west as the accident of the watershed may determine. The only pass which at present is available for transit through the construction of the Canadian Pacific Railway is the Kicking Horse Pass, which is reached by following the valley of the Bow River, with a greatest height in the mountains of 5,300 feet. To the south and near the Boundary another railway, as a branch of the Canadian Pacific, passing through the Crow's Nest Pass, will soon, however, rapidly lead the traveller not only through coal fields of marvellous richness, but into a district where the moderating influences of the chinook winds from the west exert their greatest effects. For 500 miles from the eastern boundary this great mountain province stretches to the western ocean. The railway, as it emerges from the passes of the Rockies, winds in and out through the gorges and defiles of the valley of the Columbia in the Selkirks with their splendid ice-clad peaks, crossing thence the plateau till the valley of the East Thompson is reached, where it goes to join its northern branch at Kamloops, whence together they run till they meet the rushing Fraser at Lytton, which, followed southward, turns at length westward to empty into the Straits of Georgia below New Westminster just north of the 49th parallel.

While we have traced in the most general fashion the course of the trans-continental route through the 500 miles of the western province, nothing, practically, has yet been said of its climatic characteristics. In fact there is probably no country in the world where the topography, associated with the influences of a mighty ocean current, is productive of so many variations and, indeed, varieties of climate as in British Columbia. Compare the climate of Banff with that of Victoria on Vancouver Island and we have the northern Alps and the Riviera; compare Kamloops with Vancouver City and we have the aridity of Oran and the moisture of the south of England, and this separated by a distance of only 230 miles. Pass down the Columbia through the Arrowhead Lakes, with its narrow valley, where to the east rise the summits of the Purcell Range to a height of 8,000 feet, and to the west the almost equally rugged granite ridges of the Gold Range, and we find a climate fairly moist and with the characteristics of a great river valley, not greatly influenced from the ocean, while if we pass either around the northern end of the latter range at Nicola, or the southern end by way of Toad Mountain and Boundary Creek, we reach at once the Okanagan Valley, where its benches and plateaus, rising from the lakes which flow northward to the valley of the Fraser, have a climate so curiously protected from the sea by the Coast Range, which robs the moisture-laden winds of their rain, that its rich soil, clad with verdure for a few short weeks in spring, becomes but little better than the Colorado Plains, with the bunch grass, fitted only for ranching until irrigated; yet with a mild and equable climate, such that not only grapes, plums, apples, and every fruit of our temperate climate arrive at perfection, but even the orange, fig and cotton have been grown as curiosities.

TOPOGRAPHY OF THE GOLD RANGE VALLEYS.

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Northward again, up the magnificent valley of the Fraser from Lytton, another climate meets us. Far up, for 150 miles to Barkerville and the old Cariboo gold diggings, we have the valley of the Fraser, cutting deep down through gravel banks of alluvial detritus, torn in some post-glacial age from the breasts of the "iron hills." There, rising from the waggon-road along its banks, is bench after bench of hills, till they rise into wooded mountain slopes, clothed with Douglas firs. Far up in the Cariboo range, near 54° N. Lat., are great cattle ranges where, though the snow may occasionally fall deep, its dryness enables the herds to roam in safety throughout the whole winter. Following the trail westward over the great plateau toward the coast we find, outside the Coast Range and as far north as the Skeena River, beyond 54° N. Lat., the wet climate prevailing along the whole coast with, however, much the same conditions which prevail along the west coast of Scotland to the east of the Atlantic.

The climate of Vancouver Island is such as is peculiar to islands situated where the full influences of a steady and tempering breeze from an ocean warm current are present. Occasionally with a dry season even as England may have, the island climate is moist and mild. Roses may bloom at the yuletide and the oak and the mistletoe grow like in Merrie England. English pheasants and English people keeping THE English complexions have made their homes in a country PACIFIC COAST. so like their own, and it is little wonder when with it all they have in many instances been enabled to settle down in affluence and, in a comparatively unconventional society, enjoy the earnings of a few rough years of adventure, whether in the gold-diggings of the interior, successful ventures in sealing fleets in Behring's Sea, or salmon fisheries up the Fraser.

In all this land the summer and autumn climates are simply perfect. Sport, on the mountains and in the river valleys, in the splendid waters of the Straits of Georgia, or continuing north into Queen Charlotte Sound where is an ocean archipelago, is everywhere of the best; and, while we shall hope to deal with individual resorts, it may in truth be said that the western province of Canada is worthy of its people, and its hospitable people worthy of their country.

CHAPTER II.

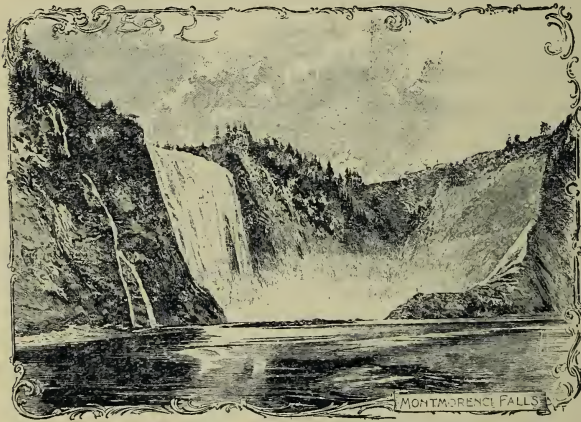
The Maritime and Lower St. Lawrence Climate and Resorts.

The characteristics of the climate of these districts are essentially those of all marine climates of the north temperate zone, not specially modified by the proximity of warm ocean currents. Cold, stormy and moist in winter, as the spring softens into summer, the breezes blow strong and bracing from the eastern ocean, and the translucent atmosphere and hills clad in deep verdure supply a freshness and tonic vigor which are a healthy balm to the weary denizens of cities along the southern seaboard, and dwellers far inland to the west. Of the favorite resorts on Prince Edward Island, PRINCE EDWARD ISLAND. where surf-bathing and brine-laden winds are to be enjoyed, Rustico Beach with its long sand dunes and pleasant hotel, on the north side, has long been famous.

Less exposed is Summerside on the narrow bar further west with its many attractions. To the south Bedique and Hunter's River are pleasant resorts on the west of the island, and Charlottetown, with its suburban resorts, as Brackley Beach, equally attracts.

In Cape Breton, yearly becoming more and more the tourist's paradise, are similar seaside resorts, and notably Ingonish Bay and St. Anne's have their surf-bathing beaches on the east side, to which are added the shores of Sydney Basin with its pleasant old towns of Sydney and North Sydney. A short journey south brings many a tourist to the historic ruins of the old fortress of Louisburg, while coasting westward, the old settlements of Arichat and Isle Madame add pleasant variety to the holiday. There are, perhaps, no resorts superior to those on the inland lakes of salt water, known as the Bras d'Or Lakes. Of such Baddeck is the most popular and perhaps the most beautiful, while Grand Narrows and Whycocomagh Bay, with many other places, all supply the grateful freshness of the sea with an absence of the more boisterous weather of the eastern coast.

Crossing the Gut of Canso to the mainland, and the resorts on the three coasts of Nova Scotia are reached. Tonic and bracing breezes from the Gulf blow over Antigonish and Pictou harbors on the east, while on the south coast from Wine Harbor to Yarmouth, the whole coast, as a local authority has said, is one long health resort. Halifax on Bedford Basin and the North-West



MONTMORENCI FALLS, NEAR QUEBEC.

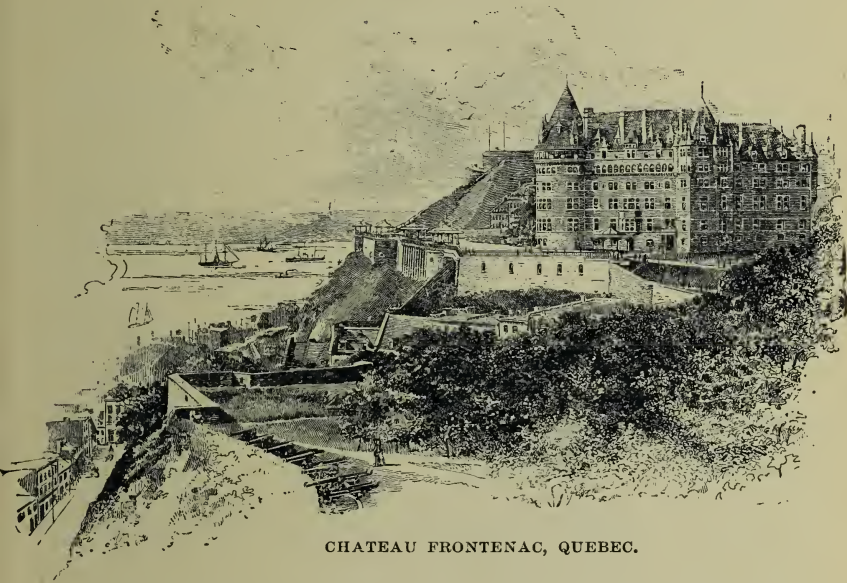
Arm, and its many islands dotting the entrance to the harbor, cannot be excelled either for health-giving qualities or loveliness of scenery, to which must be added the many attractions due to a society reflecting the influence of the military of one of Her Majesty's Imperial naval

stations. Westward are the old towns on St. Margaret's and Mahone Bay, especially Chester and Lunenburg, and the many islands of an ocean archipelago.

Of another sort is the climate of Minas and Digby Basins on the Bay of Fundy side of the peninsula, which marks the "Land of Evangeline." Here in the vale between the North and South Mountain is a Latmian land of great apple orchards and sea-meadows, with a climate moderated by the protecting hills, yet bracing from the sea breezes wafted in from the mighty tides of the Bay of Fundy. Parrsboro, Windsor, Wolfville, Kingsport, Annapolis and Digby, all tempt the traveller to rest and quiet content. Across the Bay of Fundy is the City of St. John, and to the northward the broad basin of the Kennebecasis with lovely Rothesay and its groves and shady drives. Westward on Passamaquoddy Bay are the two historic towns, now pleasant watering-places, of St. Andrews and St. Stephens. Inland, up the valley of the St. John, are many pleasant resting places, but none so classic or so inviting as the old town and political capital of Fredericton. Here the climate is still influenced by the sea-tides, but is drier and more fitted to recuperation from rheumatism and its allied neuralgias. It makes a pleasant diversion to

leave the eastbound train of the Canadian Pacific Railway at Fredericton Junction, and after spending a few days in Fredericton to take steamer for St. John, through scenery which outrivals the Hudson.

Following the east coast of New Brunswick, northward, we again reach the Gulf resorts from Shediac and the towns on Miramichi Bay and those on the warmer waters of the Baie des Chaleurs. From
NEW BRUNSWICK. Bathurst to Dalhousie on the south shore and eastward again to New Richmond and Bonaventure with the high mountains of Gaspé, a protecting wall to the northward, are many pleasant watering-places, as New Richmond, New Carlisle and Percé, where the cold Gulf waters have grown warm in the long shallow arm of the sea, making sea-bathing perfect in the summer months.



CHATEAU FRONTENAC, QUEBEC.

Shorter holiday months mark the climate of the resorts on the St. Lawrence, where as at the Saguenay, the river widens into the gulf. From the hillsides of Tadousac and Chicoutimi and Ha Ha Bay on the
THE LOWER Saguenay, to Cacouna and Rivière du Loup on the south
ST. LAWRENCE. bank of the river, we have a climate which suits best the *pater familias* from inland towns. For all that teaches of the majesty of nature, surely the young can spend their holiday amidst no more soul-inspiring and body-strengthening scenes than the mountains and the sea at Cacouna and Bic or the winding paths of the hills and the fishing grounds about Tadousac and Murray Bay.

Always first to the tourist and sight-seer on the St.
CITY OF QUEBEC. Lawrence is the old citadel town of Quebec. Most think of it as the historic scene of battles and sieges, and memories of the French regime ; but few indeed are the places which, during all the long summer and autumn seasons, for variety of scene and interest, are likely to bring vigor equal to that which comes to the traveller who lingers in the old city, perched high upon the citadel and having the fresh river and mountain air alternately blowing over the promontory. Then, too, the many drives to the pretty French villages as Montmorenci and Lorette, and the steamboat

and short trips by rail to the many local points of interest, make Quebec especially attractive as a place to summer in. Its air is crisp, clear and invigorating. Many a warm day is experienced climbing in and out the old narrow streets, but with night-fall comes a grateful coolness and refreshing sleep after the pleasant fatigues of the day. From the Chateau Frontenac windows and towers, the majestic river, dividing past Orleans, with the Falls of Montmorenci, ever ceaseless and thrilling, on the north, and the long rows of white French cottages in Beauport and L'Ange Gardien, and the deep blue veil of haze clinging to the dark hills in the distance, are seen, and one may fairly thank nature, history, and the æsthetic sense of the managers of the Canadian Pacific Railway, for having supplied such a bountiful combination of most of what lends grace, pleasure and attractiveness to existence.

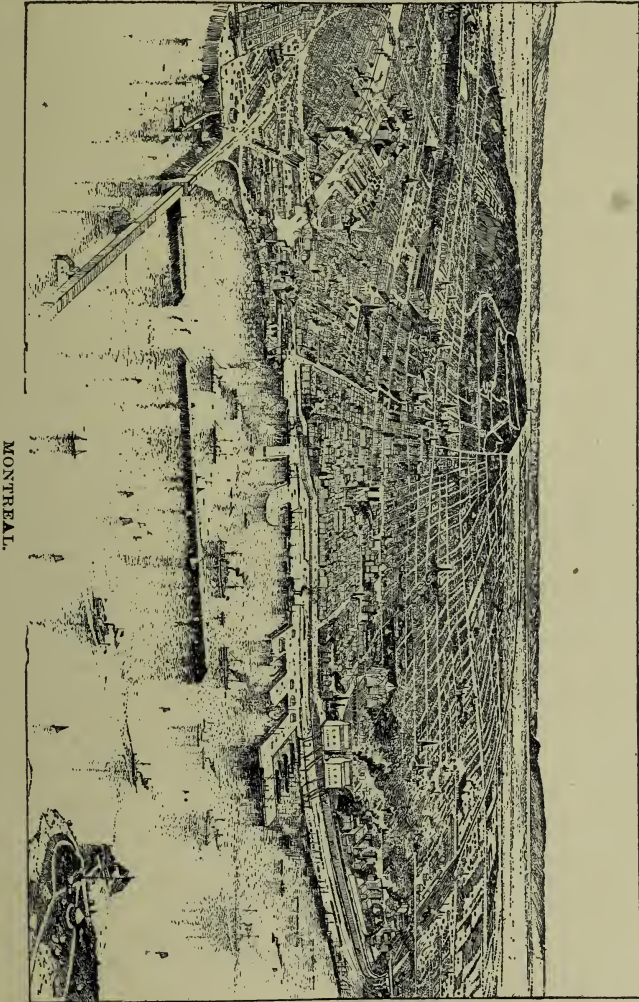
CHAPTER III.

The Upper St. Lawrence and Great Lake Climate and Resorts.

Although the tides affect the river waters as far west as Three Rivers, the climate west of Quebec is essentially inland. Many pleasant French villages along the St. Lawrence from Sillery Cove to Montreal supply a pleasant change for a summer's holiday. Of the rivers flowing into the St. Lawrence the St. Maurice on the north shore, and the Richelieu, St. Francis and Yamaska on the south, afford pleasant opportunities for canoe trips and visits to such notable local scenery as the Shawanegan Falls on the St. Maurice, the Big Brompton Falls on the St. Francis, the Long Rapids of the Magog, beautiful Lake Massawippi, a famous fishing ground, and the splendid river scenery from Sorel southward to Lake Champlain. There is, too, Belœil with its high cliffs, and the broad Basin of Chambly. Farther up are the Islets of St. John and the snowy foam of the rushing waters of the rapids. Thence to Lake Champlain and Lake George, the tourist passes over ground every foot of which is historic with memories of cruel Indian raids and gallant defences by the scattered settlements of the old French regime.

Of all this region Montreal is the centre. It is 172 miles from Quebec and, situated on the steep slopes of Mount Royal, may well lay claim to being the first city on the continent for combining with commercial greatness the charm of picturesqueness of location and attractiveness as a place of residence. The particulars of the climate of Montreal are set forth in tabular form in another place, but it may here be referred to as having with Ottawa, those peculiar and positive qualities which mark the inland districts of older Canada. Its summers are warm and beginning with May, supply until November every quality, which can make city life healthful and enjoyable during the warmer months. Bright sunshine in the day followed by cool evenings, sufficient rainfall to make parks and boulevards, lined with the typical forest trees of Canada, masses of foliage of the deepest green, well-paved streets, and tramways to the suburbs and excursion boats to the suburban parks on the St. Lawrence and the Ottawa River to the west and north, all serve to make it a summer resort for visitors from the sunny South, which may not be surpassed. From November to the spring, Montreal has the true Canadian winter. Steady cold, with abundant snow clothing the ground, makes the air dry, crisp and ozonized, and exercise or the life of business in the open air, with its bright sunshine during the short day, or in the glorious star lit

nights, has an exhilaration which is quite unknown to the dwellers in the more southern climates, where winter is a succession of rain, snow, thaw, raw winds and cold again. The story of the sanitarium for consumptives at Saranac Lake in the Adirondacks may be repeated for every true inland climate of Canada. Even with the cool summer climate of this resort in the mountains, the annually published reports repeat, again and again, the statement that it is in the cold, crisp, dry air of winter that the sick make most flesh and the destructive processes are most rapidly arrested. The winters of old Canada,



apart from the shores of the Great Lakes, make hundreds of places as truly sanatoria as the high-level resorts of the Pyrenees or the Alps; while the bright summer days with their cool nights reduce to a minimum those dangers to the children of city-dwellers, which decimate them in the towns and cities to the south where the heat of the long summer day often extends far into the night.

Montreal is, however, the gateway to those places which, on the banks of the upper river and the Great Lakes beyond, or on the rocky islands of its

turbulent channels, have long been the favorite health resorts of thousands from the warmer South during the summer months. Rapids are passed through long canals, and the far-famed Thousand Islands above Brockville are reached. Here for forty miles of river, thousands of islands, low, bare, grey rocks of granite, or wooded to the water's edge if spared from the fire, break everywhere the swift-flowing waters, only to make them rush more impetuously through the winding channels between. From Brockville, Gananoque and Kingston, at the head of the river to the towns on the Bay of Quinté, the most favored of the shores of Lake Ontario, suburban residences and local parks abound. Sailing out again into the lake by the Carrying Place canal, the several old towns of Cobourg and Port Hope, all summer watering-places for southern visitors, are passed, and Toronto, the western metropolis, is reached. With the other towns and resorts on the north shore of Lake Ontario, the city is famed for the coolness of its summer days and the fresh evening breezes coming in from the lake. Indeed, many prefer for a summer outing the warmer inland lakes farther north, as having the day's heat mellowing the coolness which often comes at nightfall in these great lake regions.

HEALTH RESORTS OF THE THOUSAND ISLANDS.

LAKE ONTARIO.

Toronto is so familiar to every tourist and sight-seer who visits Canada that lengthened reference here is unnecessary. From May to November the climate of all this lake region is splendid, but for many the winters are somewhat sharp with often raw winds from the lake, which mark especially the early spring months. The head of the lake with Hamilton, Dundas and Ancaster situated within the rim of the mountain basin, has long been known as having a peculiarly attractive climate. The soil is granular and porous, and the protecting mountain makes the district much less subject to lake influences, and with more snow and a steadier winter, has a notably early spring. This latter peculiarity becomes still more marked as the south shore of the lake is followed along the Niagara peninsula, fitly termed "the garden of Canada." The climate of the winter is rather too damp and mild to be wholly enjoyable, but from opening spring till the latest autumn, the peninsula has few equals. Old Niagara-on-the-Lake has long been a famous resort and is rapidly becoming the summer home of hundreds from Toronto and Buffalo. Its lake and river scenery, its level drives and bicycle runs up the Niagara banks to the foot of Queenston Heights, its old fort and review ground make it one of the few show-places of Western Canada. The plateau above the Heights, through the new route opened up by the Canadian Pacific Railway to Buffalo, is approached from Hamilton, and the view of the plain below, the lake beyond, the country again away to the north with the wall of the rock escarpment rising into shadow, taken with that from Queenston looking down the winding Niagara River, are undoubtedly without their equal in Western Ontario.

CITY OF TORONTO.

THE NIAGARA PENINSULA.

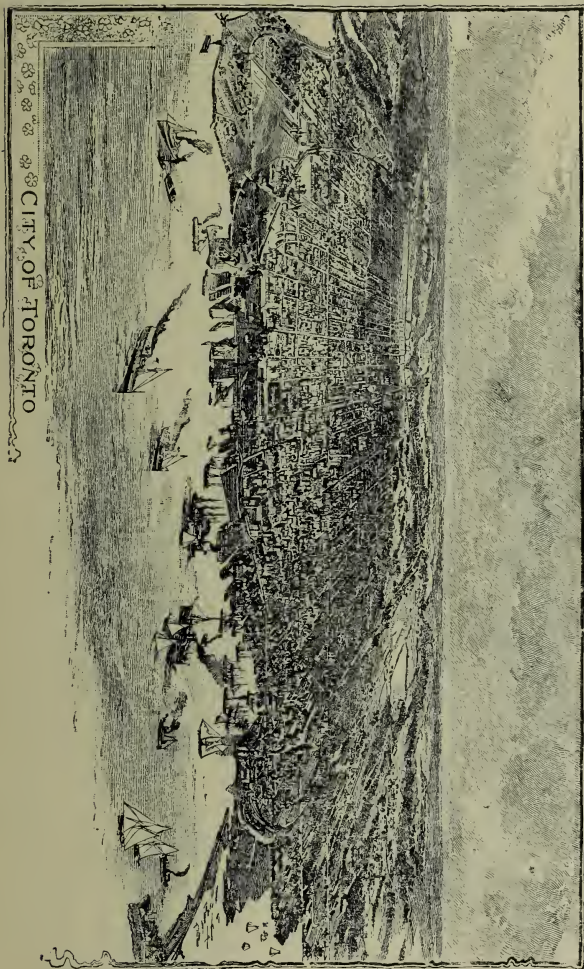
But the roar of Niagara is in our ears, and by cars harnessed to the power of the cataract itself we pass up the gorge or look down upon the foaming river winding between perpendicular walls of rock, till the whirlpool is passed and the falls are in sight. To sojourn in this lovely spot from May to November, or gaze day after day upon the miracles of its ice-bridges in winter, has so long been the delight of the tourist that it seems almost unnecessary to again attempt to describe what all who are most familiar with the Falls of Niagara acknowledge to be indescribable.

Beyond the Falls the river foams and boils in its swift descent over the irregular ledges of Niagara limestone and the adventurous boatman sails past Navy Island with its historic memories, and Grand Island, the summer resort of thousands from Buffalo at the head of the river. Here Erie, the lowest of the great upper lake chain, is reached. On its shores old-time lake ports, as Port Colborne, Port Dover, Port Burwell, Port Stanley and others, established before the days of railways, are passed, all of which have become popular watering-places for the towns inland in their respective vicinity. All have

fine sand beaches, and the warmer waters of this lake make bathing enjoyable. At the head of the lake are many groups of low-lying islands of extreme fertility, and on the western peninsula and along the banks and islands of the Detroit river are delightful resorts in the very warm weather which often prevails in the district.

Naturally, however, in summer, the tourist longs for the cooler breezes of the upper lakes, and so taking one of the many splendid steamers leaving Windsor or Detroit, he passes north-

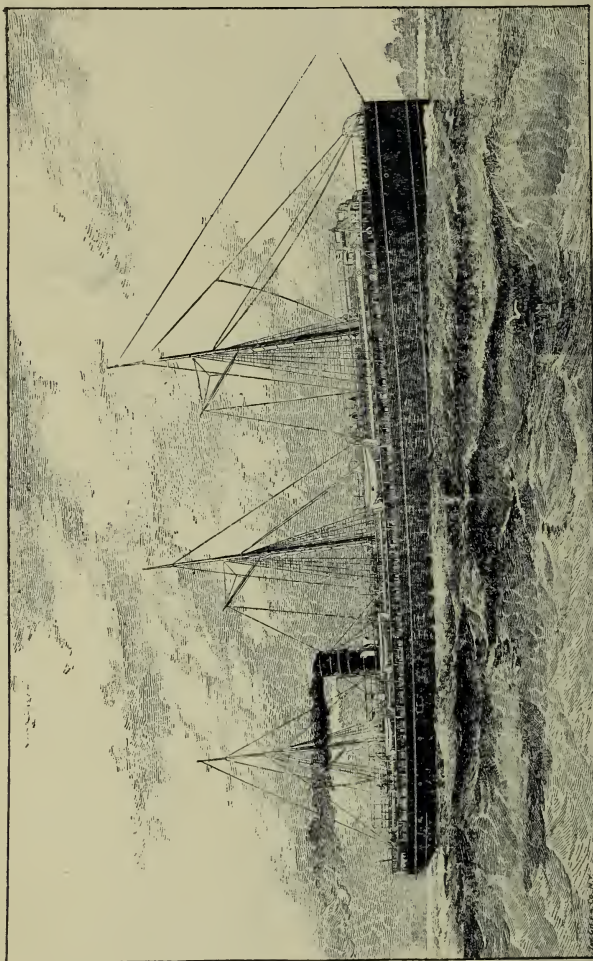
ward between the level and fertile lands of either shore, through Lake St. Clair with its wild-rice fields, the haunt of myriads of wild-fowl, and glides up the River St. Clair past Sarnia at the entrance to Lake Huron. Here are the towns of Goderich, Kincardine, Port Elgin and Bayfield, overlooking the lake from their clay cliffs, all of which are very deservedly popular as being, while cooling to the prevailing westerly breezes, subject to a less daily range of temperature than almost any other of our great lake shores. The Bruce peninsula with its warm, sandy and stony soil, and its



LAKE HURON

HEALTH RESORTS.

breezes blowing crisp and cool from every quarter, is rounded, and Wiarton, looking eastward, and Owen Sound, rimmed in with hills, are reached. From here to Parry Sound are Meaford, Collingwood, Penetanguishene, Nottawasaga and the thousands of islands off the east shore, all notable rendezvous for those who look for recreation and rest in active exercise. In this district we have undoubtedly one of the most tonic and bracing climates in all Canada. But we must not linger, but push on northward past the Manitoulins and La Cloche and the many pleasant camping islands of the north shore of Lake Huron, and enjoy the beautiful trip up St.



CANADIAN PACIFIC RAILWAY COMPANY'S UPPER LAKE STEAMSHIP ON LAKES HURON
AND SUPERIOR.

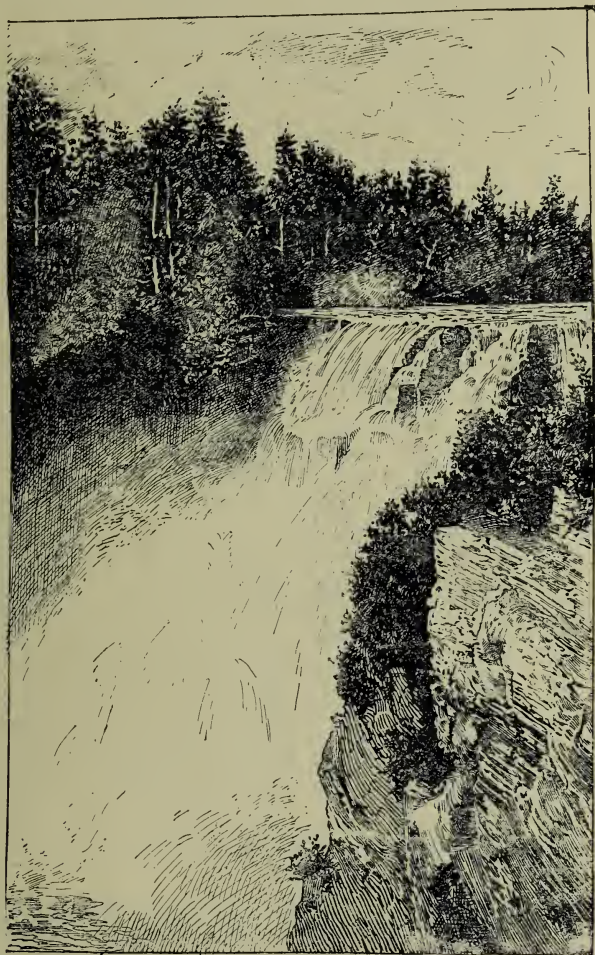
Mary's river, to the Sault Ste. Marie. Here the broad but shallow river descends some 21 feet from Lake Superior. The "Soo" in summer is often hot, at least compared with the lakes. The shores and islands in Lake Superior on the approaches to the "Soo" have a number of summer resort hotels with very pleasant surroundings. But it is when the

LAKE SUPERIOR. holiday-seeker and tired city-dweller journeys from Owen Sound in the perfectly appointed C. P. R. steamer, and passing through the "Soo" begins to feel the presence of a great inland sea of pure, cold and clear water at a level of 606 feet, that he realizes

all that a stimulating climate means, while still being sedative. He knows not why, but he finds his nerves at rest; he feels a change has come over him—he sleeps. And then appetite returns, and soon the exhilaration of long promenades on the steamer's upper deck seizes upon his very nature. It seems generally conceded that no sea-voyage can exceed, if it can equal in rapidity, the tonic effects of these voyages upon the upper great lakes of Canada.

Should the tourist, however, prefer the railway trip in his journey to North-western Canada he will find not only that he passes numerous inland

streams and lakes beautiful enough to tempt a visit, but that as the Canadian Pacific road comes in sight of Lake Superior at Jack Fish, panoramas of lake and island, winding shore and rocky bluff break upon him, which are indescribably grand. For many miles along the coast these bays and arms of the lake run inland, and in the blue haze which veils the rocky island hills and in the dark reflection of their beauty in the calm lake waters, the desire to rest comes over him and



KAKABEKA FALLS, NEAR FORT WILLIAM.

he dreams of some Lotus land "where it seemed always afternoon" and he will perchance pitch his tent on some sheltered bay, and so fishing and sailing, spend many happy days in this land where, on Thunder Cape, the sleeping Manitou is resting, but whose spirit lingers and blesses all who come to love and enjoy the gifts he has for his children, or the historic Kamini-tiquia River may tempt him to view its mighty cataract—the Kakabeka Falls, easily reached by rail or stage. At the head of the lake, Thunder Bay narrows down between more precipitous and bolder shores, and the lake and land transportation meet at the great docks of the Company at Fort William, at the

mouth of the Kaministiquia. One here begins to realize that he is in North-west Canada and with implicit trust casts himself upon the mercy of the great transcontinental railroad which will lead him to further marvels westward.

CHAPTER IV.

Inland Forest Climates.

Situated north of the 45th parallel the climate of this area of Canada is very definitely that of the north temperate zone, uninfluenced by the modifying influences of the warm current of the Pacific Coast. It is, in fact, a climate in winter of steady cold with abundant snowfalls, beginning in November and extending to March. As the growing sun makes his influence felt, the snow rapidly disappears and with April spring has set in. Vegetation is rapid from May onward and the long summer days have come. Contributing very largely to the regularity of the winter temperature is the fact that the whole district is clothed with dense forests of deciduous trees and evergreens, notably pines, spruce, balsams and hemlock, while cedar and tamarack are abundant in the lower grounds along the courses of the streams.

Another condition which characterizes the Laurentian over this extensive area from other mountain ranges is the folding everywhere of the primeval rocks, by which crest and trough, the *anticlinal* and *synclinal* succeed each other, alternating hill and valley and thereby creating countless lakes, large and small, with their innumerable connecting streams. Those flowing from the "source" lakes, the highest in the Algonquin Park region being some

2,000 feet above sea-level, carry the dark waters to the larger lakes and streams, which finally go to make up the chain of the Great Lakes, the St. Lawrence and the Ottawa, to the southward, and from a second height of land turn numerous streams northward into Hudson's Bay. Over all this region so similar in its rock formation, the strata of gneiss present many denuded surfaces, owing to the fires which have swept over sections of the country, such as the Muskoka Lakes region, and during the long summer days we find these bare surfaces, accumulating the heat of the sun, only to be radiated again, thereby tempering the night temperature, already so notably mellowed by the great surrounding forests which mechanically prevent rapid radiation from the earth, as well as by the great surfaces of the foliage, which day by day goes on storing up heat, which the sap carries from leaf to root and thence to the leaves again. Most notable, too, is the light granular character of the soil formed from the disintegrating granite, being permeable to moisture, and wherever cleared absorbing the rains with great avidity, so that dryness of the soil where settlements exist very generally may be assured.

Such are the chief physical conditions which have made the Adirondack region of northern New York State famous, and which for thousands of square miles supply Canada with a sanitarium suited to the maintenance, in the highest degree, of health in the healthy, and for restoring thousands of candidates for tuberculosis, as Verneuil calls them, to health. Since the great transcontinental route of the Canadian Pacific Railway has passed through this region a whole new world has been opened up to the tourist, the invalid and settler. From the hunting grounds of Lake St. John, 190 miles north of Quebec, with its splendid hotel at Roberval, and the grand scenery and "ouananiche" fishing at La Grande Décharge, westward across a magnificent forest region watered by the Batiscan, are the St. Maurice, L'Assomption and many other large streams flowing into the St. Lawrence to the Ottawa—that noble stream which divides this rocky region from the

THE

LAURENTIDES.

QUEBEC INLAND
RESORTS.

alluvial plains westward, and which receives splendid rivers from the east as the Rouge, La Lièvre, the Gatineau. The Montreal river, further north, flows into the Ottawa, from that most magnificent series of lakes, first for scenery, for settlement, for hunting and fishing, principal of which is Temagaming, all of which may be reached within a few hours or a day from the line of the Canadian Pacific Railway. On the west from the head lakes of the Rideau almost to the Lake of the Nipissings is another series of splendid rivers where the searcher after picturesque scenery, the excitement of fishing, canoeing and hunting or the rude settlers' life or that of the lumber camp, finds such an *embarras des richesses*, for the Ottawa basin alone has 60,000 square miles, that he becomes perplexed as to which he will enjoy first. In many parts of this region small settlements have sprung up, most of them as lumber villages, and to the most favored of these spots summer visitors go for quiet and wholesome recreation.

Here and there mineral springs have become the centre of sanitariums, such as the St. Leon's Springs of alkaline waters, near Three Rivers, and the Caledonia Springs on the new Short Line of the Canadian Pacific Railway, between Montreal and Ottawa. Settlement began in this latter region early in the century, and for many years MINERAL SPRINGS. the virtues of this sanitarium have become increasingly known. There is a large and well-equipped hotel with a beautiful park and grounds, and bathing in the sulphur waters and drinking of the alkaline springs have proven most beneficial to thousands of invalids. These waters, too, find a large sale throughout Canada.

The constituents of the several waters appear below :—

ANALYSES

Of the "Duncan," "Saline" and "White Sulphur" waters of Caledonia Springs and of other much used waters of the same class

	Caledonia Springs, Ontario, Canada			Harrosgate, England	Kissengen, Rakoczy	Saratoga, Congress
	Duncan	Saline	White Sulphur			
Chloride of Sodium	122.50	64.41	38.43	144.85	63.80	70.02
do. Potassium .....	.31	.30	.23	7.42	3.14	1.48
do. Calcium	2.87			15.21		
do. Magnesium	10.34				3.32	
Bromide of Sodium .....		.17	.10		.09	1.49
do. Magnesium .....	.24					
Nitrate of Sodium .....					.10	
Iodide of Sodium .....		.01	Trace		Trace	.02
do. Magnesium .....	.02					
Sulphate of Sodium .....		.05		1.40		
do. Potassium .....			.18			.15
do. Magnesium					6.42	
do. Lime					4.27	
Carbonate of Magnesium	8.63	5.17	2.94	.14	.18	12.62
do. Lime	1.26	1.17	2.10	2.10	11.57	17.42
do. Soda		1.76	4.56	3.05		1.30
do. Lithia .....					.20	.52
do. Baryta .....						.12
Phosphate of Lime .....					.06	
Iron	Trace	Trace	Trace		.34	.04
Silica .....	.22	.41	.84		1.41	.14
Alumina	Trace	Trace	.03			
Carbonic Acid	5.01					
In 10,000 parts of water, grs.	151.40	73.45	49.41	174.17	94.90	105.32

From these analyses it is seen they must be highly beneficial in gout, rheumatism and their allied neuralgias.

The waters of St. Leon and of the Alpha Springs, near Arnprior, are saline and essentially the same as those of the Caledonia Springs.

The western and southern slopes of the watershed of the National Algonquin Park and notably the Muskoka Lakes region and the Gull-waters from Peterborough northward, owing to their proximity to the older settlements of Ontario, have become especially well-known. In the summer of 1897 philanthropists opened a splendidly constructed and well-equipped sanitarium for consumptives near Gravenhurst, and the all-year round treatment of consumption in the Laurentian region of Canada has now begun. As we shall see later the complement of this class of sanatoria will be found in

ALGONQUIN

NATURAL PARK

AND MUSKOKA

RESORTS.

the dry climates of the foothills of the Rockies, and still more in the ranching country of British Columbia. But the Muskoka Lakes are merely one of the jewels in the crown of this north country of health resorts. Lying between the Ottawa River and Lake Huron, and extending northward to the "Height of Land," are series upon series of lakes and streams, similar to those of Muskoka, attaining in Lakes Temiskaming and island dotted Temagaming even larger areas, and marked notably in Temagaming by a loveliness as unique as it is rare. West of these are streams leading southward and westward, as the Sturgeon, Vermilion, Serpent and Spanish Rivers, forming with their lake expansions chains of canoe routes as yet almost untraversed except by the trapper, the lumberman and prospector. There, removed from the dust and smoke of cities, and those many impurities ever attaching to settled human habitations, thousands from the cities to the south are destined to find not only vigor in exercise and rest through unbroken slumbers to the overworked brain, but also relief from that plague of town-dwellers, the neurosis which many choose to call "hay fever." Dependent primarily upon exhausted nervous energy, followed by malnutrition and loss of tone in the respiratory mucous membranes, the dust of the street, the vitiated house-atmospheres and the damp of night air in cities create an irritation which makes nasal congestions and catarrhs the bane of city life during the long summers of the cities to the south. To such northern districts as these we have mentioned the sufferer may go, resting assured on the experience of many, that he need only paddle his canoe, or bask in the mellow sunshine and sleep under a canopy of hemlock boughs upon the shores or islands of these northern lakes to be relieved, almost in a day, of what may have caused him months of discomfort and suffering. From North Bay on Lake Nipissing to Thunder Bay the country so far as it has been opened up is practically that along the Canadian Pacific Railway, and with many pretty lakes and rivers till Schreiber is reached, gradually approaches the shores of Lake Superior. The country west of Thunder Bay, already spoken of, has all the characteristics of the Eastern Laurentian region, with, however, notable tracts of alluvial lands about the Wabigoon and Seine rivers, but notably in the Rainy River district near the American boundary, at present reached by Rat Portage on the lovely Lake of the Woods. All that has been said regarding the climate of the Eastern Laurentians may be repeated of this, and to-day with this country yielding everywhere rich prospects of gold and other minerals, it may fairly be expected to settle rapidly both because it is a good country wherein to get gold and to enjoy health in the getting of it. At Rat Portage the Winnipeg River begins, and in an hour or two the scene is changed and the prairie, broad and illimitable, is reached.

CHAPTER V.

Prairie Climates.

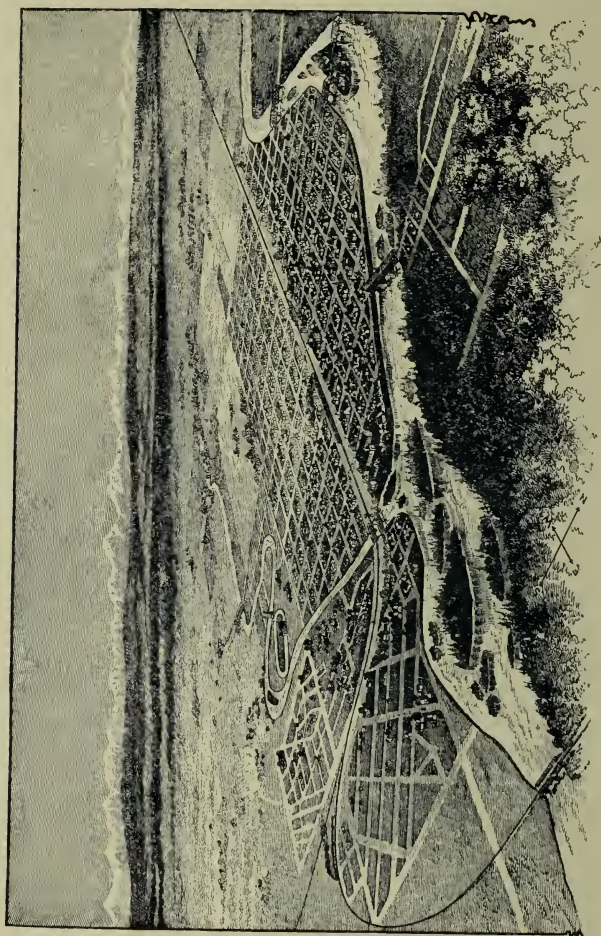
The chief physical features of the great prairies of the Canadian North-west have been already set forth in our first chapter, and we need here refer only to some of their climatic characteristics. According to the particular district of this great area, several distinctive differences exist, depending upon: (a) height above the sea level, (b) upon the constituents of the soil, (c) its proximity to the western mountains, (d) and in some degree upon the latitude. Half way between Rat Portage and Winnipeg, the rocky district gives way to plain, and thence through a flat and more or less wet country, we gradually enter the true prairie country with wide fields of grain and cultivated farms, giving promise of the better things in store farther west. The dark black lands of the river valleys of the Red and Assiniboine are soon reached. South-west from Winnipeg toward the Boundary is the rolling Pembina mountain district, with its wooded bluffs and lighter soils. Brandon district to the westward has lighter gravel soils and so here as elsewhere local variations present attractions for different persons.

MANITOBA. Certainly in the wooded, rolling districts the protection afforded against high winds must present notable advantages. Regarding the climate of this vast territory, extending to the Rockies, it may be said that, from May to late October, the intensity of the sunshine, the long daylight, the marvellous rapidity with which the surface soil dries before the winds which seem always to blow in the afternoon, all serve to create conditions which, as regards health, leave but little to be desired. Physicians of the country, who have lived in Great Britain, or in Eastern Canada in a more wooded and undulating region, seem all agreed that the climate of Manitoba and adjoining territories has most positive reconstructive qualities, and through promoting digestion and a rapid metabolism supply new tissue elements with an accompanying elimination of the waste products of the system. These facts are illustrated by the active life of the individual and of the people as a whole. Were we to coin an expression, we would say that it is a "nervous climate." It might be concluded that the inevitable effects of such a climate would be a proportionately early exhaustion of vital energy. Whether this be true as regards the life of city-dwellers, time will tell; but we have had time enough to judge of its effects on three generations of Europeans, settled on the Red River since 1817, and of these more than one has lived to celebrate Her Majesty's Jubilee in 1897. It is very certain that such a climate is stimulating, whether in winter or summer; but such is essential both for the enjoyment of vigorous outdoor life and for resisting the low temperatures of the winter months. Those who have lived longest in the country are agreed that the steady cold of winter is in itself, most enjoyable, and only seems excessive when the occasional storm with a moister air and high wind occurs.

From what has been said, it is apparent that the climate of this great area for the people engaged in those open-air pursuits, which are the natural occupations of the people, must be favorable to recovery from ailments due to defective nutrition, such as pulmonary complaints, neuralgias, rheumatism and disorders of digestion. As yet it is not a country of health resorts or watering places, although many pretty spots may be found, as the public parks in the suburbs of Winnipeg, where may be seen splendid groves of oaks, elms, birch, poplars and maples, to which the city-dwellers resort; but the life and occupations of the agriculturist make the whole country one to live in, and through engaging actively in such pursuits to so renew their health and vigor. The long winter from November to March, and the class of

farming suited to the country, make it easily possible for the people to take their holiday in winter, as many do, visiting their homes in the moister climates of Eastern Canada or England, or by a journey to the warmer states of the south, thus reversing the practice of the peoples of southern climates, who must journey for rest and change in summer to the mountains or the great lake country of the north.

Westward towards the mountains, the climate changes quite notably, owing both to the proximity of the snow-clad summits and to the increased



BIRD'S-EYE VIEW OF CALGARY, ALBERTA.

elevation above the sea. The stimulating qualities of this climate already referred to become here still more marked. Intense insolation at mid-day, a

THE CYPRESS HILLS AND CALGARY PLATEAU OF THE FOOTHILLS.

low relative humidity of the atmosphere, very rapid and great changes of temperature at nightfall, all due to the small rainfall, and the elevation above sea-level to thousands of feet, are all qualities which mark this region as belonging to the distinctive class of "Rocky Mountain climate." In the diagrams and tables found elsewhere, these special qualities will be illustrated.

Of the settlements, those about Calgary, Macleod and Lethbridge are all

favorably known; but of all this upland region none probably presents a more favorable combination of qualities for a considerable range of diseases than the district about Maple Creek. Whatever the physiological explanation, it is certain that the effects of the climatic qualities already mentioned are to so promote nutrition and reconstruction of tissue that tuberculous cattle transported thereto from the lower levels and moister climates of old Canada have rapidly regained flesh, and remained for years in seemingly perfect health, while many a consumptive has found that in this climate his disease has been stayed, and recovery in not a few instances has taken place. Probably no better illustration of the peculiarly health-giving qualities of the climate could be given than the remark recently made by a traveller: "that it was no wonder the Calgary ranchers are jubilant over their commercial prospects, for not only are they obtaining exceptionally good prices, *but their milch cows seem to grow as big as oxen!*" In the occupations of outdoor life, such as that on the great ranches, rather than in those of the towns, are we to look for such benefits to the sick as we have a right to expect from this climate of the foothills. Once let the invalid so improve as to be able to ride his broncho over these measureless plains, and enjoy the exercise in breathing the rarefied and ozonized air of absolute purity, and his recovery is almost assured. And it is just as certain, and he ought to know it, in order that the cure be permanent, that continued residence in the climate for perhaps many years is essential. And indeed in few places can existence become a more real pleasure than in this life of perfect freedom, removed far from the exacting conventionalities of society, and in touch with nature in her ever-changing moods.

CHAPTER VI.

Rocky Mountain and British Columbia Inland Climates.

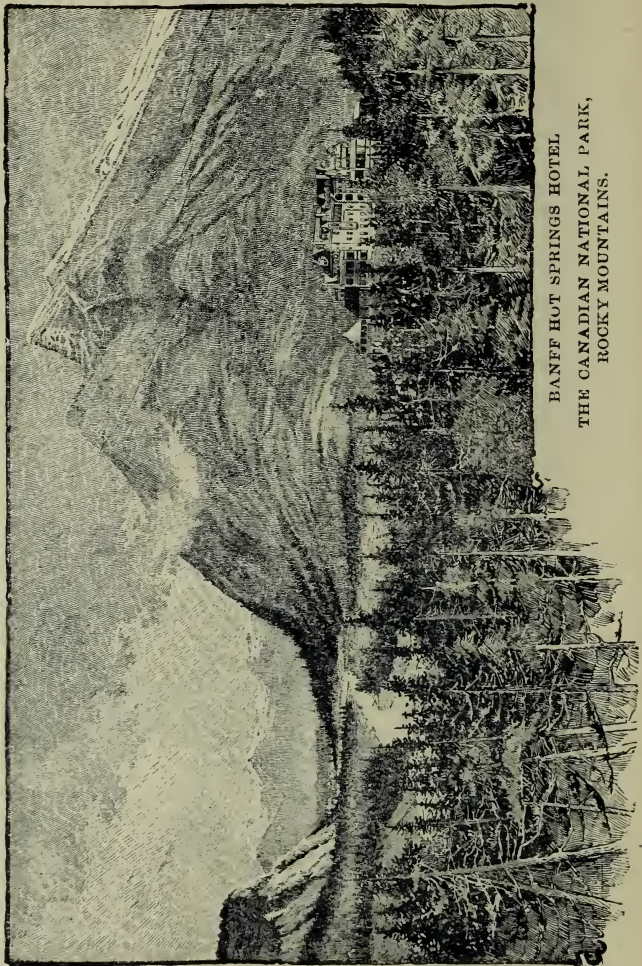
With a mountain range whose higher peaks reach heights exceeding 8,000 feet above the sea, and in the latitude north of the 49th parallel, we are prepared to meet with climatic conditions differing very greatly from those of the great plateaus of the prairies and foothills, and comparable to those which mark lofty mountain ranges in every quarter of the globe. To realize what is included under the term of Rocky Mountain climate, we have to realize that in the 500 to 600 miles from east to west, early upheavals of rocks of every age in geological time have taken place, forming five distinct ranges of the Cordilleras of the North. From east to west they rise in succession, the Rocky, the Selkirk, the Gold Range, the Coast Range, and the Vancouver Ranges, the latter on Vancouver Island in the Pacific. Uplifts of the sedimentary strata of many ages are torn apart and pierced with volcanic eruptive rocks of granite with all its modifications, which, in successive ages, have by erosion been again redistributed in the great valleys in bench after bench, and give an ever-changing series of lofty peaks, rolling uplands, elevated plateaus, deep river valleys and gulches through which pour down the floods from the winter snows and the eternal ice of the glaciers of the higher levels. In the 300 miles from Boundary Creek on the 49th to Fort Scott on the 54th parallel, the climates are as varied as the surface conditions mentioned, the ever-changing elevations and the different directions and slopes of the mountain ranges and river valleys, make possible. To attempt any detailed description of the climate of a country as yet very imperfectly explored, with comparatively few exact meteorological observations, would in any case be difficult; but when, as in many cases in British

Columbia, accentuated climatic differences exist within a very few miles the task, with the space at our disposal, becomes quite impossible. We shall, hence, attempt nothing more than to refer to the climate at a few points of present interest, leaving the future to teach us more of this country of marvellous undeveloped resources and undiscovered beauties both of scenery and climate. From the east the Canadian Pacific Railway passes from the plain beyond Calgary and, as the Kananaskis River is approached, we realize that

we are entering the gateway to the West through two almost perpendicular rock walls. Following the valley of the Bowriver through the rocky gorge with lofty mountain peaks rising on either hand, we reach the Rocky Mountain National Park and Banff, the health resort, with its celebrated hot mineral springs. The marvels of this mountain scenery have so often been described that more need not be attempted here. The

climate is Alpine, and has an atmosphere of such ethereal clearness, freshness and purity as at times to transport the visitor into an almost supernatural region. For the convenience of tourists

ROCKY MOUNTAIN
NATIONAL PARK
AND BANFF
SANITARIUM.



BANFF HOT SPRINGS HOTEL
THE CANADIAN NATIONAL PARK,
ROCKY MOUNTAINS.

and invalids, there is a beautiful hotel located convenient to the Hot Springs, in the midst of splendid scenery, fitted up with all modern conveniences and open from May to October. In addition, there is the mountain sanitarium near by, under expert medical supervision. The springs are strongly sulphurized, and have been supplied with bathing houses and attendants under the care of the Government. The effects of this climate and these hot springs on rheumatic affections and

diseases of nutrition have now for years been favorably proven by hundreds of invalids.

The character of the water of these springs is gathered from the following analysis of a gallon, or 70,000 parts, with a temperature of 123° Fahr. :

Chlorine (in chlorides) ..	0.42 grains.
Sulphuric Acid (SO ₃) ..	38.50 "
Silica (Si O ₂) ..	2.31 "
Lime (Ca O) ..	24.85 "
Magnesia (Mg O) ..	4.87 "
Alkalies (as Soda, Na O ₂) ..	0.62 "
Lithium ..	A decided trace.

Passing Laggan at an elevation of 5,000 feet in the vicinity of the famous Lakes in the Clouds, and Lakes Louise, Mirror and Agnes, those marvels of beauty, the summit is reached at Stephen, 5 296 feet above the sea. Field with its pleasant hotel makes another quiet resting-place for those who desire such scenery and a stimulating climate. The descent to the west is rapid within the next thirty miles, following the canyons of successive streams, until the second or Selkirk division of the Gold Range is entered. Here at Glacier House days of outing may be spent at the mountain hotel near the Great Glacier. There the railway has again ascended the summit of the pass to 4,300 feet, and on the mighty summits, Sir Donald and Ross Peak and the whole western slope of the range, are precipitated the moisture from the ocean which has escaped condensation on the slopes of the Coast Range. Thence the descent is rapid for forty miles till Revelstoke, on the Columbia River, is reached. With only an altitude of 1,475 feet we now approach the region of the great bench lands and elevated plateaus, although lofty peaks of spurs of the Gold Range are seen on either

hand. Leaving, daily, Revelstoke, on the main line
THE KOOTENAY of the Canadian Pacific Railway, one may reach in an
COUNTRY. hour by the railway, winding through the valley of the

Columbia, now wide, narrowing again as the granite walls approach, the head of the beautiful Arrowhead Lakes. Here the means of transit seem to have changed as magically, almost, and as rapidly as the shifting mists and clouds of the mountain summits; for replacing old barges, the tourist can on steamers, large, handsome and as well-appointed as those of the Great Lakes. pass south to Robson over the crystal waters, rimmed by the abrupt mountain ranges on either side; thence again by the railway, to Nelson, Trail and golden Rossland, at present the chief centres of that treasure land of mineral wealth, the West Kootenay District. From Nelson again other boat lines are run to the mining centres of Balfour, Pilot Bay, Ainsworth, Kaslo, Lardo and Argenta on the upper Kootenay Lake, while to the lower portion another line is run from Nelson to Kuskanook, the latter point being the present water terminus of the Crow's Nest Pass Railway from Macleod, Alberta, which is to be shortly opened for traffic. And again by railway from Nakusp, winding and climbing to a height of 4,000 feet, the Slocan silver district is reached, Sandon, so noted in this connection, being at the terminus of the line, while Slocan City has boat connection from Roseberry, and rail connection with Nelson and Robson. Lying east of the Purcell Spur of the Gold Range, at the sources of the Columbia and the Kootenay rivers, is the East Kootenay district, with Cranbrooke and Fort Steele as its centres, a beautiful tract of farming country amidst mountains, with a fine, steady climate, with, however, as everywhere in the Selkirks, much snow on the higher mountain sides in winter. The Crow's Nest Pass Railway before mentioned, will now prove a most important factor in the future development of this section of the country. It is of much interest at present to know that

the climate of this mining country, of so great promise, is like the greater part of British Columbia. The climate from May onward, when the high waters have come down from the mountains, is splendid. While in many valleys the abrupt mountains may cause sudden precipitation of moisture, yet it is, on the whole, a climate of bright sunshine, with warm days and cool nights, the influences of warm western winds from the Pacific making the climate mild till December. At Christmas-tide, 1896, at Trail, on the Columbia, the weather was spring-like and bright with but little frost or snow. The



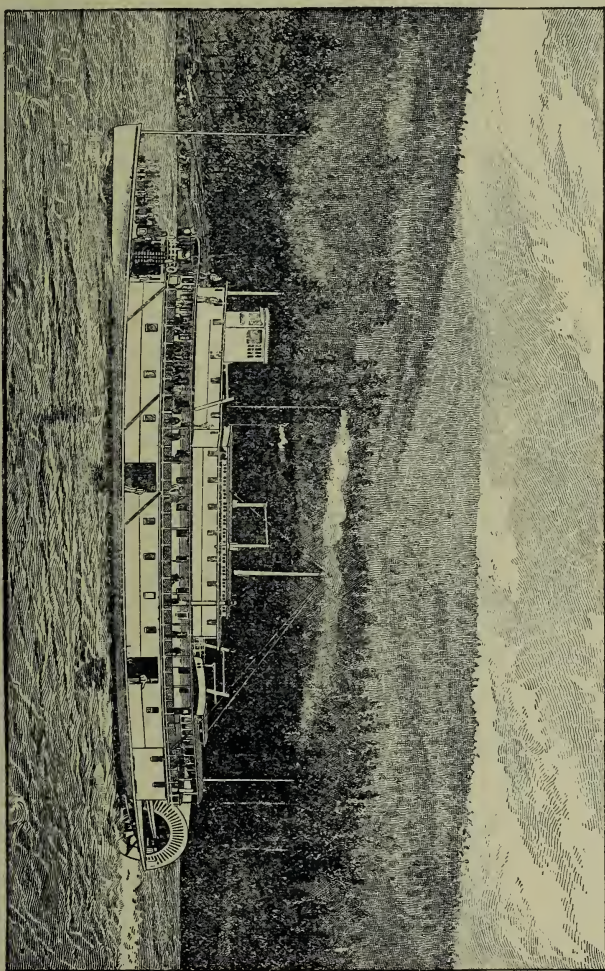
LAKE LOUISE, NEAR LAGGAN, ONE OF THE "LAKES IN THE CLOUDS."

snowfalls in the mountains, near by, may, however be heavy, and exceptionally heavy snows may lie to April, when they disappear as if by magic, at times filling the mountain streams with rushing torrents. Only in January and February does the weather become cold; and while the "prospector's" working day is shortened, work at the mines may readily proceed the winter through. Excepting the evils incident to new camps and mining towns, due to defective sanitation, this new El Dorado may lay claim to being fitted to become the pleasant, healthful and happy home of thousands West of the

valley of the Columbia, as it flows southward from the Arrowhead Lakes to the Boundary, is a spur of the Gold Range; beyond which, from Kettle River, at the Boundary, northward to the Thompson, is the great country of the Okanagan, consisting of lower valleys and undulating plains and bench lands westward to the slopes of the Coast Range, which of all British Columbia has that climate which will go far to give it claims as the great Canadian sanatorium. Of a width of 100 miles or more and 150 from

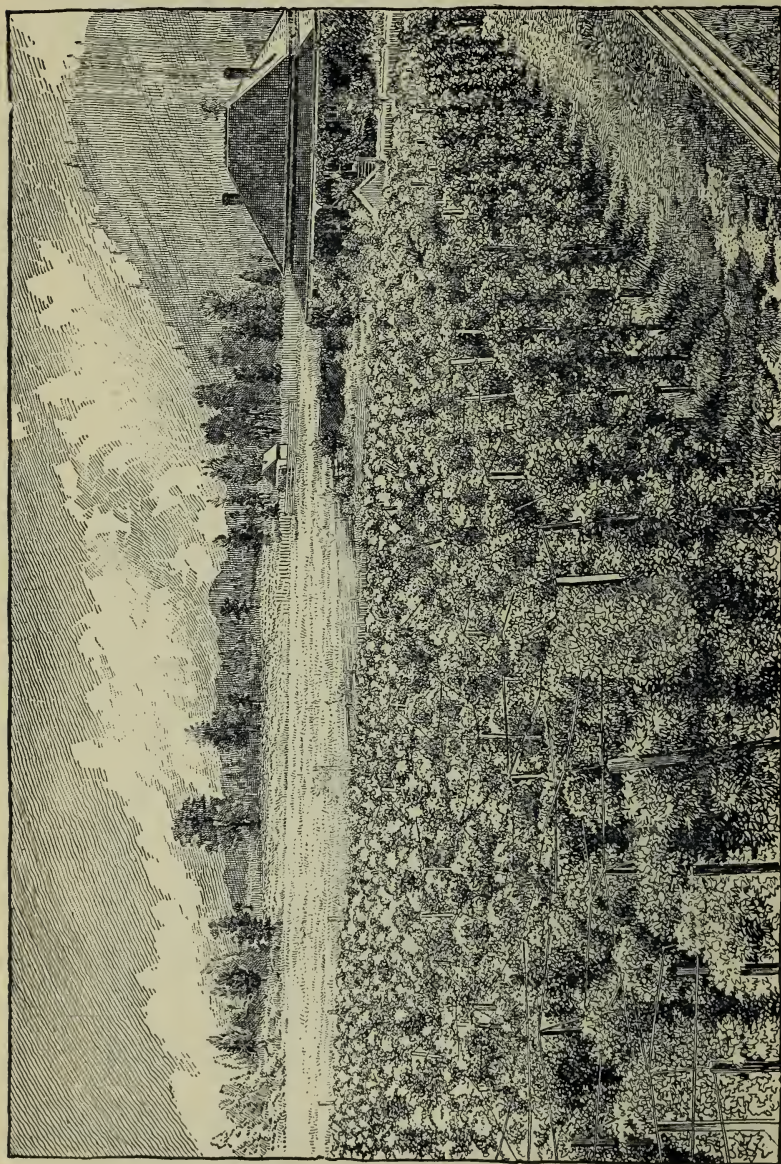
THE DRY
OKANAGAN
VALLEY.

CANADIAN PACIFIC RAILWAY COMPANY'S ARROW LAKE STEAMSHIP.



north to south, this country has running northward, to the Thompson, the series of river and lake expansions known as the Okanagan Lakes. The general level of the bench lands lies between 1,000 and 2,000 feet, Vernon being 1,200. To describe it would be to follow up an endless series of valleys, as of the Kettle River, of the Similkameen River and Osoyoos Lake, having the lowest average temperature in January, only 22.6°, and highest average 75° in July, of the Princeton and Granite Creek valleys extending to Nicola, near the rail and stage, lying to the northward, and having a rainfall in 1890 of 5.4 inches and very limited snowfall, not exceeding 5 inches as rain, of the Penticton and Trout

Creek valley at an altitude of 1,100 with the bottoms for hay-cutting and the ranges for cattle rising hundreds of feet as bench lands. Hillsides here are of a rich sandy loam, and clothed in many places with pine and the Douglas fir, with cottonwood, birch and willows along the river bottoms, as in the country surrounding the Okanagan Lake, from the Mission to Vernon some



HOP GARDEN, AGASSIZ, BRITISH COLUMBIA.

forty miles apart. Transportation is made convenient and speedy from the railway terminus at Vernon to points along the lake till Penticton, some forty miles south, at the head of the lake, is reached, by means of the pretty steamer, the "Aberdeen," named in honor of the Governor-General, who has large estates along the lake. Here the total annual rainfall does

not exceed 10 inches, with a highest average temperature in August of 64° and the lowest in February of 21° . About Vernon are the Okanagan valley proper, the White valley, Creighton valley and the country of Mabel and Sugar lakes, all with a climate much the same as at the Okanagan Mission, the altitude being 1,200 feet. Near Kilowna, some thirty miles from Vernon, is the estate of the Earl of Aberdeen, on which the largest horticultural development of the province has taken place. Hundreds of acres have been planted in orchard. Every fruit of the temperate climate grows, the tobacco plant and hop flourish, and even cotton has been grown as a curiosity. The apple, plum—prunes reach perfection here—and all small fruit flourish; grapes ripen nicely, and roses may be seen in full bloom in the end of October as far north as Kamloops. From Spallumcheen

THE KAMLOOPS COUNTRY.

to Salmon Arm eastward, and to Kamloops westward on the Thompson, both along the line of the Canadian Pacific Railway, is a similar country, the climate all being practically the same as that of Kamloops, with the lowest average temperature in February of 13° F. Northward from the Thompson for a hundred miles is another region of rolling bench lands, a similar country, growing somewhat colder with the latitude, but in a surprising manner maintaining a dryness far north into the Chillicoten rolling prairie country west of the Fraser; while at one hundred miles north of Kamloops such a moderate temperature exists that cattle maintain themselves all winter on the ranches in latitude 52° . Beyond this the rainfall increases till in the northern part of the plateau the forest has become more dense, and has the characteristics of the great forest areas of Eastern Canada. Three thousand feet of height practically limits everywhere general agriculture on account of summer frosts through these five degrees of latitude, but even at Fort George (54° N. Lat.) wheat is grown at 1,880 feet.

Regarding the climates of all this inland country Sir G. Dawson, Chief of the Geological Survey of Canada, says: "The climate of the interior is in marked

THE INLAND VALLEYS.

contrast to that of the coast. Though the mean annual temperature differs but little in the two, a great difference is observed between the mean summer and mean winter temperatures, and a still greater contrast between the extremes of heat and cold, as exemplified by Spence's Bridge and Esquimalt compared. At Spence's Bridge the total rainfall is 11.3 inches, making an open or lightly timbered country for ranching, while Esquimalt has a rainfall of 40 inches."

CHAPTER VII.

The Pacific Coast Climate.

Here Canada has the best example of an "island climate" as known to Englishmen. Extremes of temperature, and especially of daily extremes, are almost unknown. This applies to all the islands and the coast line from Puget Sound northward through the Gulf of Georgia to Queen Charlotte Island, even to the 54th parallel. In all this country the fruits of temperate climates grow well, and farm animals live outdoors the year round. The rich bottoms of the

PACIFIC COAST.

Fraser delta have long been famous for their great hay crops and pasture lands: but here the extreme of rainfall is met, the mean for six years being 59.66 inches at New Westminster. The climate of the great island of Vancouver, running north-west across two degrees of longitude and two degrees of latitude, presents every variety from that at the sea coast, with, as at Esquimalt, a very low daily range, and no annual extremes—the lowest temperature in two

years being 8° F., the lowest monthly average being 20° F., and the highest in summer being 82° F.—to that as above Alberni on the west coast, where the Vancouver Range rises first into a plateau to 4,000 feet, and even to 7,500 feet in Victoria Peak.

Apart from the mineral wealth of the island, its climate, with every variation possible, becomes most attractive. Its sea-shore climate is milder than many parts of England, with less rain and less seasonal variations. The west slope of the Coast Range has a rank vegetation, owing to the excessive rain-falls, and the lower grounds, if mild, have, as a climate for residence, attractions rather for the pursuit of agriculture than as health resorts for the invalid. The archipelago, along the coast as far north as Alaska, has however established a reputation for a pleasure trip, in some respects unequalled on the continent. Running between verdure clad islands and the sharply rising mountains of the shore, the visitor has a panorama of natural beauty ever appearing before him. Far north the glaciers from the mountain summits are seen pushing down into the sea, and the glories of the fiords of Norway and the west coast of Scotland are duplicated. For pleasure, without satiety or inconvenience, it is difficult to find any long railway journey with a better complement than a trip from Vancouver up the Sound, after crossing the continent with its 4,500 miles of inland scenery.

CHAPTER VIII.

A Comparison of Climates.

Nothing is more difficult than to gain from the tables of averages of temperature, as ordinarily given, any correct idea of what any climate really is. This cannot be better illustrated than by a comparison of the coast climate of Victoria, B.C., with that of Spence's Bridge on the Fraser River, with an altitude of 700 feet and 175 miles inland from the sea, and of Birmingham, Eng. The following are monthly averages:

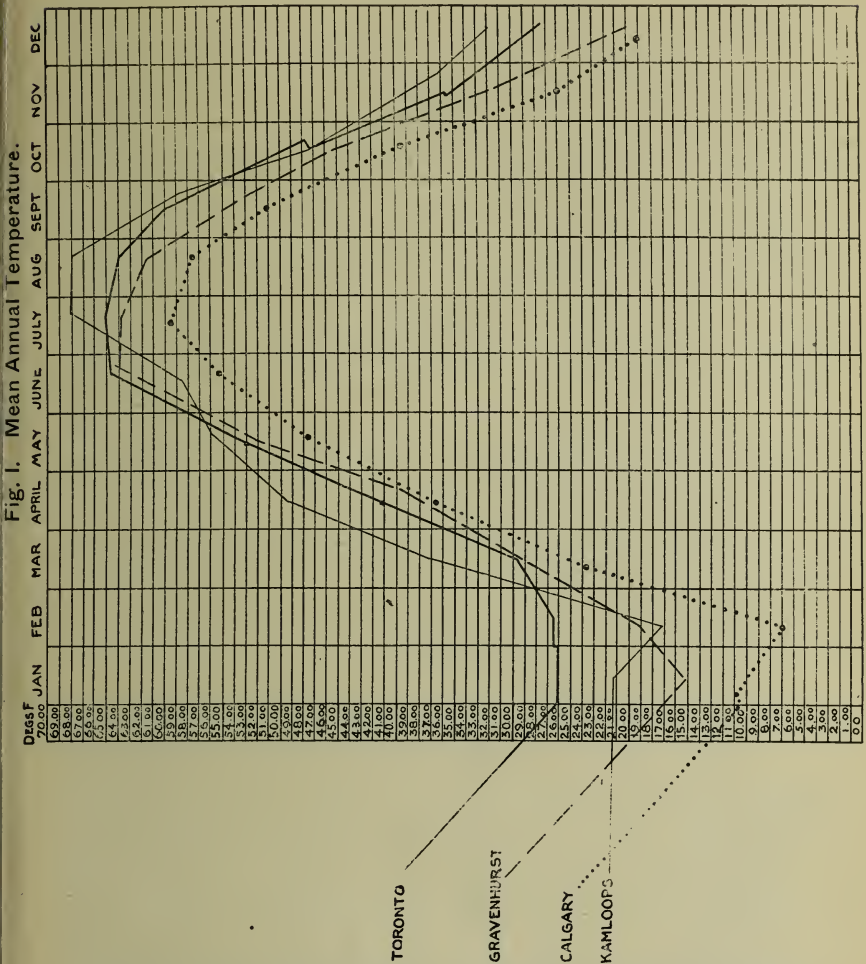
TABLE I.

	Jan.	Feb.	Mar.	Apr.	May	June	
Victoria, B.C.	32.4°	33.9°	42.3°	46.3°	53.5°	56.3°	.....
Spence's Bridge, B.C.	11.9°	17.2°	39.5°	50.9°	62.9°	64.8°	.....
Birmingham (England)	39.9°	39.1°	43.5°	47.6°	52.9°	60.7°	.....

	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual Mean
Victoria, B.C.	58.4°	58.1°	53.7°	47.8°	45.4°	43.7°	47.65°
Spence's Bridge, B.C.	71.5°	71.9°	61.7°	48.8°	42.3°	36.3°	48.31°
Birmingham (England)	61.1°	56.8°	54.4°	43.3°	38.9°	38.1°	48.00°

We thus see that, while in the first quarter the inland climate of British Columbia has an average of 13.73° of greater cold, the average for the summer quarter is 11.64° higher, and the yearly averages are practically the same. The highest temperature during the year at Victoria was 78° in July, and 101° was the highest at Spence's Bridge. We hence have two distinctly different classes of climate, an island and an inland, or continental, climate, differing greatly in rainfall, in daily range and in seasonal variations, but which, at first sight, seem almost identical.

The following diagrams are equally illustrative of the variations in the four classes of inland climates of Canada, viz. : the Great Lakes Climate, the Forest Climates, the Prairie Climate of the North-west Plateau, and the Inland Climate of British Columbia.



The annual mean, latitude and altitude, and rainfall of these four places are:

TABLE II.

	Annual Mean	Latitude	Altitude	Rainfall
Toronto	45.0° F	43° 45'	354 feet	34.04 inches
Gravenhurst	41.8°	45°	750 "	36.77 "
Calgary	36 9'	61°	4,500 "	11.54 "
Kamloops	46.3°	50° 45'	1,200 "	11.05 "

The diagrams illustrate very clearly the most important climatic factors, notably the daily range and the number of rainy days. By a comparison of Kamloops with Toronto we again see two climates, with almost the same annual mean, very different in the important health elements of daily range and the number of rainy days. When the comparatively low daily range, the very great number of days of bright sunshine and the high annual temperature, and

especially the early advance of spring—as where the mean for March is 8° higher for Kamloops as compared with Toronto—are noted, we see that in Kamloops we have a climate which possesses in a degree, probably not excelled in any climate in the world, the several elements which theory, as well as the experience of hundreds of persons, has proven to be of the greatest importance in the reconstruction of

tissue and the rapid restoration to health of those persons suffering from consumption and other diseases due to defective nutrition. This country, described by a great Canadian statesman as a “sea of mountains,” has golden treasures, not more for the adventurous spirits who delve deep into her granite mountain sides, than for him who has wasted his energies in the gloomy counting houses of some densely populated English city. To such a person, and to all continental readers, the comparison given in the first table with the temperature of Birmingham, Eng., for 1896, must be of interest, as showing either that “Our Lady of the Snows” has transatlantic sisters, or that Canada, with her brighter skies, her drier and more stimulating air, may well lay claim to all the good qualities, and more, of climate, which all loyal Britons claim for their “Merrie England.” Notably colder in November and December, Birmingham can claim to be milder than Victoria only in January and February; while the dry country of the inland plateau, with its eleven inches of annual rainfall, has a lower temperature only in January and February, with an atmosphere so dry and stimulating and a sunshine so bright that the snow is dry and fluffy and only serves to add a still greater purity and beauty to a climate which, like old wine, has been kept to the last to bestow its benefits upon mankind.

How far the climates of the East Coast provinces and the St. Lawrence approach conditions so desirable as those set forth in the previous table and diagrams may be gathered from the following table illustrative of the principal districts which have been briefly described in the foregoing pages.

TABLE III.

Giving Annual and Quarterly Mean Temperatures, Daily Range and Rainfall

	Height above Sea Level	Annual Mean	Winter Mean	Spring Mean	Summer Mean	Autumn Mean	Average Daily Range	Rainfall in Inches
ONTARIO								
Alton	1,300 ft.	41° F	24° F	50° F	60° F	31° F	18° F	37
Goderich	728 "	45°	28°	52°	62°	37°	.....	32
Galt	880 "	44°	26°	53°	62°	35°	18°	34
Gravenhurst	750 "	41°	21°	51°	61°	31°	21°	32
Kingston	285 "	42°	23°	51°	63°	31°	15°	34
London	932 "	46°	30°	55°	63°	37°	.....	41
Ottawa	330 "	40°	19°	57°	63°	28°	19°	32
Owen Sound	697 "	43°	26°	50°	62°	35°	15°	39
Parry Sound	640 "	39°	19°	40°	60°	30°	13°	39
Port Stanley	575 "	45°	29°	52°	63°	37°	16°	40
Toronto	352 "	45°	28°	52°	63°	36°	16°	37
QUEBEC								
Chicoutimi	150 ft.	34°	10°	44°	61°	21°	27°	24
Quebec City	296 "	36°	14°	46°	60°	24°	16°	45
Montreal	187 "	41°	20°	52°	63°	28°	15°	45
MARITIME PROVINCES								
Fredericton	140 ft.	40°	19°	49°	62°	28°	19°	48
St. John	Sealevel	41°	23°	47°	60°	32°	16°	51
Halifax	"	42°	25°	46°	61°	34°	16°	59
Sydney	"	41°	24°	42°	62°	35°	16°	49
Yarmouth	"	43°	28°	47°	59°	40°	14°	52
Charlottetown	"	40°	20°	44°	62°	32°	14°	56
MANITOBA								
Winnipeg	760 ft.	33°	3°	50°	59°	27°	22°	24
Edmonton	2,158 "	34°	3°	47°	55°	32°	22°	22
Calgary	3,500 "	35°	6°	46°	55°	33°	24°	11
Maple Creek	2,471 "	41°	9°	53°	63°	39°	.....	.....
Banff	4,500 "	33°	8.5°	42.5°	51.7°	32°	.....	.....
BRITISH COLUMBIA								
Kamloops	1,100 ft.	46°	24°	48°	65°	41°	21°	11
Spence's Bridge	760 "	48°	22°	59°	68°	42°	21°	11
Victoria	Sealevel	47°	36°	52°	56°	45°	14°	28

The averages given in the above table, and Figures I., II., III., IV., while giving correct comparisons, are not absolutely correct, since some of them are taken for too limited a number of years to give a true average for some of the stations. The data in Fig. V. are from meteorological returns for the same districts over periods of many years.

Fig. II. Mean Daily Range of Temperature.

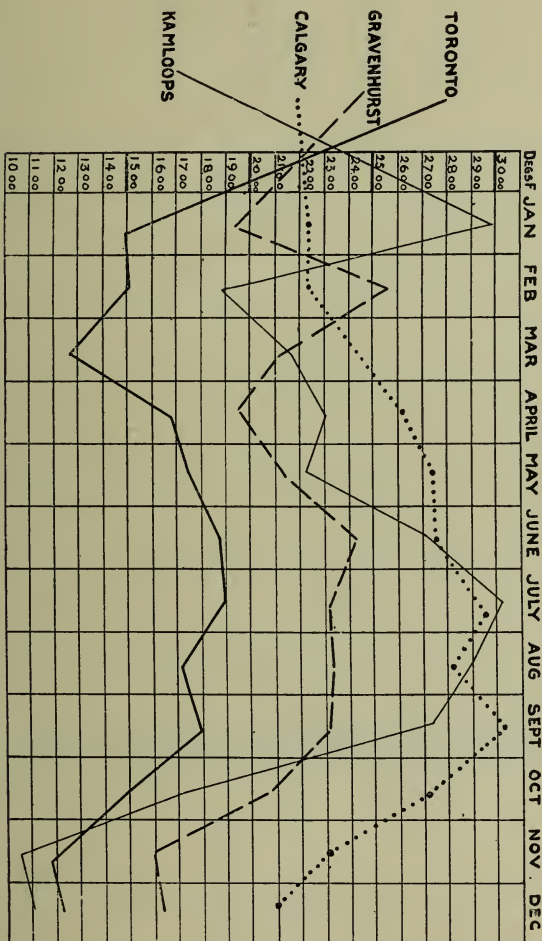
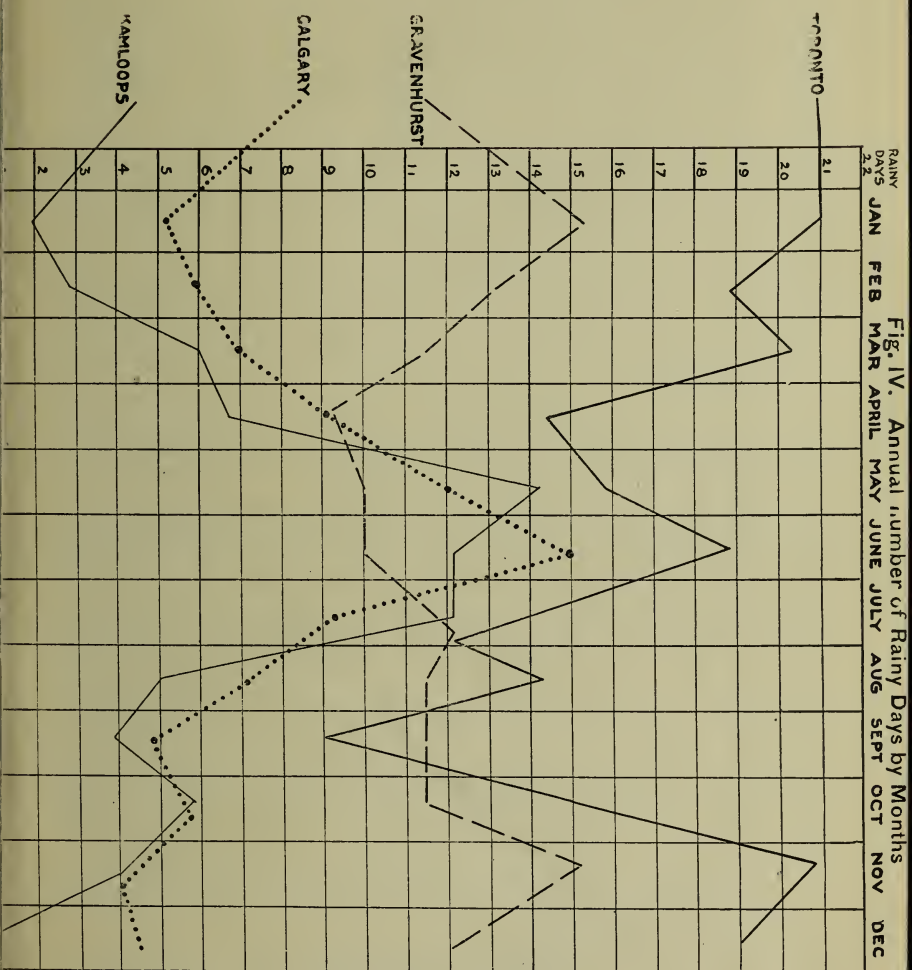


Fig. III. Annual Rainfall in Inches.





CHAPTER IX.

THE YUKON.

As illustrating the great extent and rapid development of the Western Provinces of Canada, the year 1897 has brought to the notice of the world another vast area of country, lying north of British Columbia, and now set apart as the territory of the Yukon. Lying within the coast range of mountains and east of Alaska, and to the north of 60° N. Lat., this great territory stretches eastward beyond the Rockies and northward to the Arctic Seas. Not as mountainous as many parts of British Columbia, the great plateau, where rise the many streams, as the White, the Lewes, the Pelly and Stewart rivers, which go to make the splendid Yukon Basin, has a length greater than the St. Lawrence and its chain of great lakes, being 2,200 miles to the sea. Within this basin lie the newly-discovered gold-fields, with Dawson City and the Klondike as the present centres of activity. When it is remembered that the Orkneys are in 60° N. Lat., it will be understood that were it not for the coast line of mountains, these interior plains of the Yukon would be directly influenced by the warm ocean currents of the Pacific. These, however, yield their moisture to the clouds which precipitate themselves on the rocky summits of the St. Elias Alps, but nevertheless pass inland over the mountains, still retaining something of the moderating influences of those warmer atmospheric currents. However, the latitude makes the summer short, with its almost continuous daylight, to be followed by the long winter with its briefest sunshine.

The climate of this new-found land of promise has been described in the Monthly Bulletin of the Meteorological Service of the Dominion, through data supplied by Staff-Sergeant Hayne of the Mounted Police, whose observations began at Fort Constantine in November, 1895.

In the autumn of 1895, the temperature first reached zero November 10th. This point was reached in Winnipeg, 1896, about the same date. The last zero in the spring was reached on April 29th, 1896. On March 12th it first rose above freezing, but no continuous mild weather occurred till May 4th, after which, during the month, the temperature frequently rose above 60°. The Yukon froze up on October 28th, and broke up on May 17th. Ice has been known to remain in Duluth Bay, Lake Superior, until June. During twenty-four days, however, -50° was reached in the Yukon, and on January 27th it fell as low as -65°. In June the temperature reached 70° on twelve days. The last frost was recorded on June 7th. The average for the month was 53°, or the May normal usually for Winnipeg. There was no frost in July, the average temperature for the month being 57°. Rain fell during eleven days in July and twelve days in September. May in 1897 was decidedly spring-like, with warm days and almost no frost after the 13th. The highest temperature in May was 75° on the 31st. Winter set in in 1896 in the end of September.

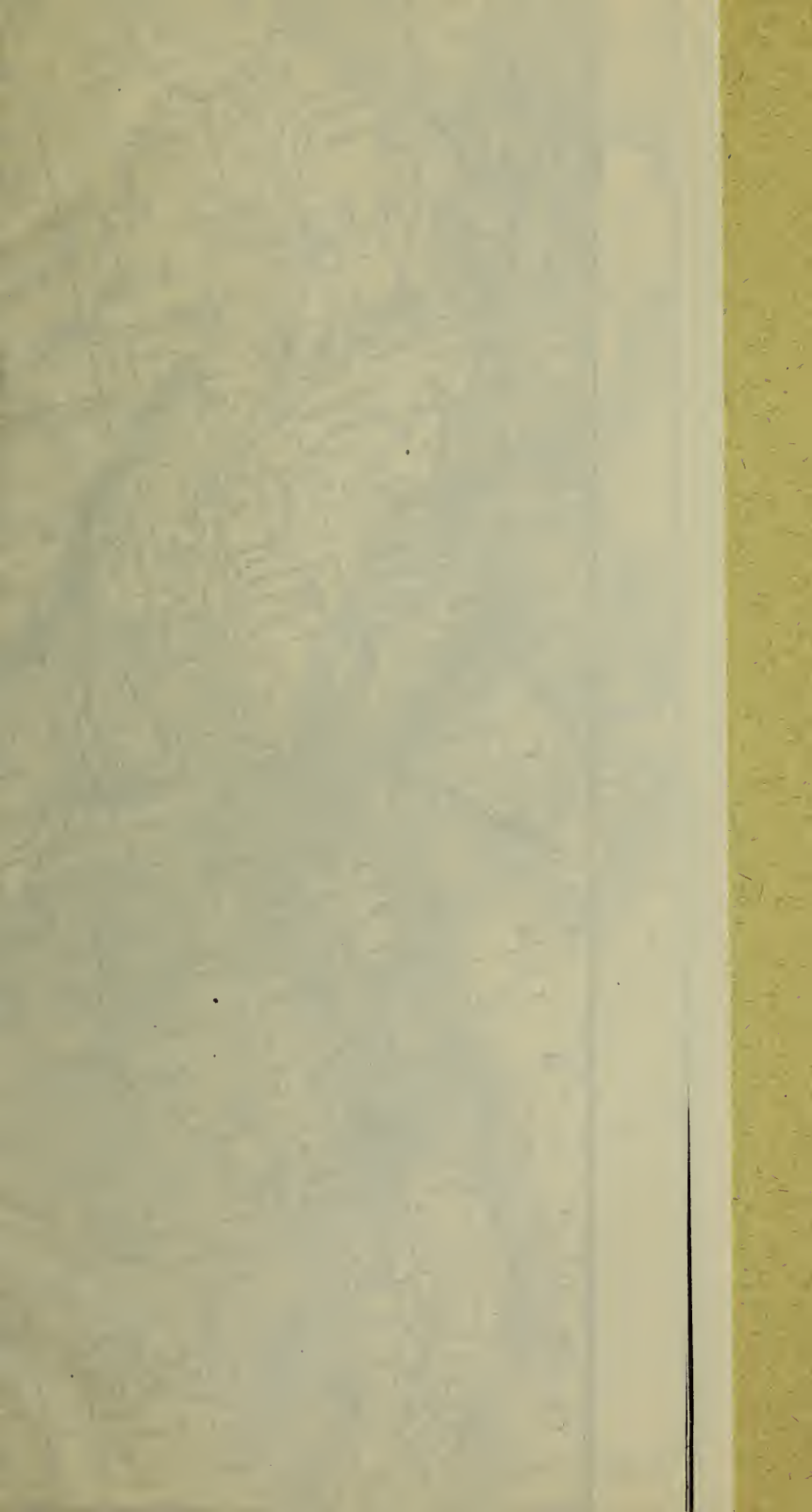
The following table gives the extremes, continuous, of the months from November 1895 to May 1896:—

FORT CONSTANTINE.

		Nov.	Dec.	Jan.	Feb.	Mar.	April.	May.
Means	Highest	13°	-10°	-30°	-12°	20°	25°	53°
	Lowest.	-2°	-25°	-46°	-35°	-5°	-4°	28°
Mean for Month		5°5	-17°5	-38°	-23°5	7°5	10°5	40°5

CALGARY (for comparison).

	Nov.	Dec.	Jan.	Feb.	Mar.	April.	May.
Mean Temp...	25°	18°	11°	7°	23°	36°	47°



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MAP OF THE
CANADIAN PACIFIC RAILWAY,
THE MINNEAPOLIS, ST. PAUL AND SAULT STE MARIE RAILWAY,
THE DULUTH, SOUTH SHORE AND ATLANTIC RAILWAY,
AND CONNECTIONS.



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THE MONTHLY JOURNAL
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